

## **PMOC MONTHLY REPORT**

### **Honolulu Rail Transit Project**

City and County of Honolulu  
Honolulu Authority for Rapid Transportation (HART)  
Honolulu, HI

*April 2019 Report*

*Submitted to Region 9 April 21, 2019*

PMOC Contract Number: DTFT60-14-D-0011L  
Task Order No. 2: Programmatic, Project No: DC-27-5272  
OPs Referenced: OP 1 and 25

#### **Hill International, Inc.**

**One Commerce Square 2005 Market Street, 17<sup>th</sup> Floor, Philadelphia, PA 19103**

PMOC Lead: Prog. Mgr. Michael E. Radbill, PE (267) 251-8341, [michaelradbill@hillintl.com](mailto:michaelradbill@hillintl.com)

Task Order Manager: Danny Rogers, PE (919)214-1921, [dannyrogers@hillintl.com](mailto:dannyrogers@hillintl.com)

Length of Time PMOC Assigned to Project: *9 months*

Length of Time PMOC Lead Assigned to Project: *9 months*

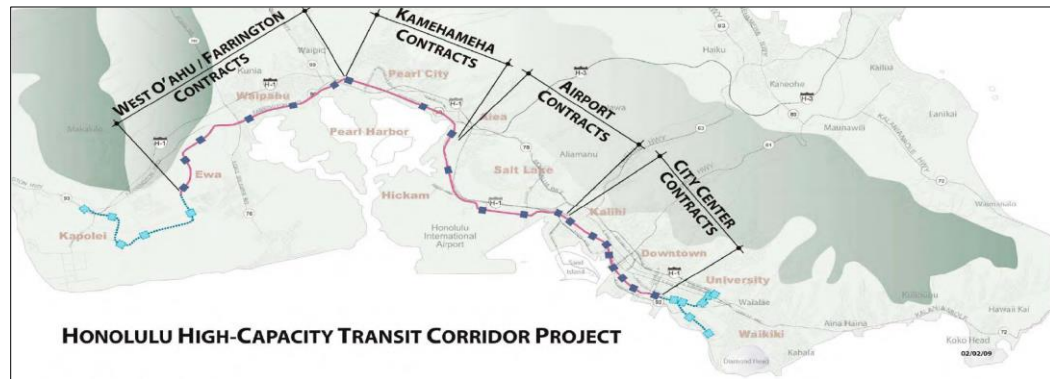
## TABLE OF CONTENTS

<b>1.0</b>	<b>EXECUTIVE SUMMARY .....</b>	<b>1</b>
1.1	Project Description.....	1
1.2	Project Status .....	1
1.3	Core Accountability Items Including Major Issues .....	3
<b>2.0</b>	<b>BODY OF REPORT.....</b>	<b>5</b>
2.1	Project Status .....	5
2.1.1	Status of Procurement .....	5
2.1.2	Status of Primary Construction Contracts.....	7
2.1.3	Status of Core Systems Contract (CSC): DBOM-920 – Ansaldo Honolulu Joint Venture (AHJV) is the contractor. ....	10
2.1.4	Real Estate Acquisition.....	13
2.1.5	Third Party Agreements and Coordination .....	15
2.1.6	Utilities.....	15
2.2	Environmental Mitigation Measures.....	16
2.3	Project Management Plan (PMP) and Sub-Plans.....	16
2.4	Management Capacity and Capability (MCC) .....	17
2.5	Project Cost.....	17
2.5.1	Contingency .....	21
2.5.2	Funding Sources.....	21
2.6	Project Schedule.....	22
2.7	Quality Assurance/Quality Control (QA/QC) .....	23
2.8	Safety and Security .....	23
2.9	Buy America .....	24
2.10	Operations & Maintenance (O&M) .....	24
2.11	Project Risk.....	25
2.12	Action Item Table .....	27
<b>3.0</b>	<b>APPENDICES.....</b>	<b>29</b>
	Appendix A: Acronym List	
	Appendix B: Contract Status	
	Appendix C: PMOC Team	
	Appendix D: Project Overview and Map	
	Appendix E: Safety and Security Checklist	
	Appendix F: Third Party Agreements	

## 1.0 EXECUTIVE SUMMARY

### 1.1 Project Description

- General Description: The Project is a 20-mile-long fixed guideway rail system along Oahu's south shore between East Kapolei and Ala Moana Center. The Project includes 21 stations. The alignment is elevated, except for a 0.6-mile at-grade portion at the Leeward Community College station. The Project Sponsor plans to deliver the project in four guideway sections as described and shown in the figure below.



• Section I	West Oahu/Farrington Highway	East Kapolei to Pearl Highlands	7 miles	6 stations
• Section II	Kamehameha Highway	Pearl Highlands to Aloha Stadium	4 miles	3 stations
• Section III	Airport	Aloha Stadium to Middle Street	5 miles	4 stations
• Section IV	City Center	Middle Street to Ala Moana Center	4 miles	8 stations
<b>Length:</b>		20 miles		
<b>No of Stations:</b>		21		
<b>Additional Facilities:</b>		Maintenance and Storage Facility and parking facilities		
<b>Rail Vehicles:</b>		80 vehicles in 20 four-car consists		
<b>FFGA Ridership Forecast:</b>		Weekday boardings – 104,300 (2020); 119,600 (2030) <sup>1</sup>		

### 1.2 Project Status<sup>2</sup>

- Project progress percentages reported by HART are based on HART's S-curve late plan as of January 25, 2019:

Project Progress	Reported Completion	Late Plan Completion
Overall	49.4%	50.7%
Design	77.9%	72.6%
Construction	44.0%	46.2%

- Estimate at Completion (EAC) remains \$9.020 billion and target Revenue Service Date (RSD) remains December 25, 2025. (Note: The EAC and RSD are not the Recovery Plan budget and schedule.)

<sup>1</sup> FFGA Ridership assumed full system operational in 2020.

<sup>2</sup> Sources of data in this report are HART's March 2019 Monthly Progress Report (MPR) and notes from the PMOC's April 9-10, 2019 oversight meetings. According to HART, "most of the schedule and cost data are presented with a reporting cutoff date of February 22, 2019, unless otherwise noted." (HART MPR Page 9)

- The following table summarizes the status of major construction-phase contracts, the details of which are in Section 2.1.2 and Appendix B of this report. *Data was taken from HART's March 2019 Monthly Progress Report:*

CPP No.	Description	Actual Last Month	% Complete As of 2.22.19		Schedule Status <sup>1</sup>
			Actual	Late Plan	
DBB-171	West Oahu Station Group (WOSG) Construction Contract	73.7%	75.6%	95.9%	8 month delay from July 2018
DBB-271	Farrington Highway Station Group (FHSG) Construction Contract	82.4%	85.0%	100%	8-month delay from January 2019
DBB-371	Kamehameha Highway Station Group (KHSG) Construction Contract	57.0%	59.0%	96.2%	4-month delay from May 2019
DBB-511	City Center Utilities Relocation	0.3%	0.5%	2.3%	On time
DBB-602	Univ. of Hawai'i West O'ahu (UHWO) Station Temporary Park and Ride	46.3%	55.2%	79.8%	4-month delay from July 2019
DB-450	Airport Guideway and Stations (AGS) Contract	39.5%	40.9%	43.2%	On time
DBOM-920	Core Systems Design-Build-Operate-Maintain (DBOM) Contract (CSC)	60.5%	61.1%	51.6%	On time for 2025 opening
MI-900	Fare Collection System	34.6%	34.6%	52.6%	12 month delay from Milestone Schedule Payment <sup>2</sup>
MI-930	Elevators and Escalators	31.6%	33.1%	TBD	Just in time <sup>3</sup>
FD-530	City Center Section Utilities & Guideway (CCUG) <b>Design</b>	92.5%	93.0%	97.5%	On time

<sup>1</sup>Delays identified are from current contract completion date.

<sup>2</sup>MI-900 – Planned information is being evaluated based on full-alignment scope versus Interim Opening scope.

<sup>3</sup>MI-930 – The E&E schedule is dependent on other contractors' schedules. Actual release for manufacturing will be coordinated for a "just in time" delivery.

 - Green indicates the contract progressed from last month.

### 1.3 Core Accountability Items Including Major Issues

It should be noted that HART submitted a Recovery Plan with revised budget and RSD to FTA on November 19, 2018; however, HART intends to continue to manage the project to its current EAC. *There were no changes from last month's report.*

Project Status: (\$ are in millions) <sup>1</sup>		Original Budget at FFGA	HART Current EAC	2018 Recovery Plan
Cost	Base Cost w/o Contingency	\$4,305	\$7,289	\$7,312
Contingency	Allocated <sup>2</sup>	542	788	765
	Unallocated Contingency	102	88	222
FFGA Finance Charges		173	584	635
Post RSD Finance Charges		42	271	254
Total Project Cost		\$5,164	\$9,020	\$9,188
Schedule	Revenue Service Date (RSD)	January 31, 2020	December 2025	September 2026
HART Total Project Percent Complete	Based on Expenditures <sup>2</sup>	No longer valid	49.4%	49.4%

<sup>1</sup>Based on data provided by HART.

<sup>2</sup>HART utilizes a weighted calculation to report progress.

Major Issues	Status	Comments/Planned Action
<i>Name Change for Ansaldo-Hitachi-Joint Venture</i>	<u>Ansaldo and Hitachi Rail have merged. The official entity for the H RTP is Hitachi Rail Honolulu Joint Venture (HRHJV).</u>	
<i>Cost and Schedule</i>	<u>HART is updating the CCGS capital cost, projected O&amp;M cost, and schedule to reflect the change to a P3 delivery method.</u>	<i>HART promised to have the updated costs available for the last two months. The current delivery date for each is April 19.</i>
<i>Center City Utilities Relocation</i>	<i>The CCUR contract remains on the "Near Critical Path" for the full RSD. Continued delays in obtaining trenching and road permits from DTS has put a strain on the CCUR schedule. The CCUR Tiger Team developed an alternative alignment through the Dillingham Road section that allows many of the existing utilities to remain in place.</i>	<i>The avoidance design has gone through the HART technical reviews and is awaiting an Executive Decision Document (EDD). According to HART, this design change saves approximately \$100 million, and several months of schedule.</i>
<i>Delay in Fabrication &amp; Installation of Canopies</i>	<i>This delay affects conduits for Core Systems' closed-circuit TV, signage, and speakers. HART issued a design amendment to increase acceptable tolerances for the KHSR canopies. NAN contracted with a new fabricator, and began fabrication.</i>	<i>HART continues to evaluate these impacts and look for mitigation options. This issue remains a concern that could threaten the interim opening. Section 2.12 of this report addresses canopy progress. Although NAN started fabricating the last group of</i>

		<i>canopies, it is likely that NAN will submit a claim for this item.</i>
Changing to a P3 procurement has delayed award of the CCGS contract, which in turn could delay the December 2025 RSD.	HART experienced a bidding delay of approximately two months by switching from a <i>Design Build contract for the CCGS to a P3. HART has now issued the RFP Part 1; however, the Part 1 submittal date for proposers to HART was delayed an additional four months (proposals are due April 12, 2019).</i> HART has amended the procurement schedule to show a revised early works NTP of February 2020, a delay of two months from the originally advertised date. HART has accommodated a portion of the delay to the procurement process by reducing the duration of procurement process by reducing the duration of the Start-up and Testing period.	HART Board Approved the P3 approach on September 27, 2018. The RFP Part 1 solicitation was issued on September 28, 2018. <i>HART received proposal(s) on April 12 for Qualifications. Per Hawaiian Procurement law, HART is not allowed to release the number or name of proposers.</i>
Management Capacity and Capability	HART continues to experience turnover in critical staff positions. <i>HART revised its staffing and succession plan on March 20, 2019. The PMOC will be reviewing the plan along with the many others that HART updated in March 2019.</i> Additionally, HART is evaluating the evolving needs for staffing a P3 delivery for the remaining contracts versus the originally anticipated Design-Build contracting.	<i>HART filled the Director of Transit Property &amp; Relocation in April with Dylan Jones, JD. HART Executive Director, Andy Robbins, stated that a candidate has been identified to fill the CFO position, and he is awaiting Board review of the candidate, before hiring. Also, HART hired Paul Giannelia on a short term contract to serve as an expert advisor for the P3 procurement. The PMOC requested resumes for MR. Jones and Mr. Giannelia for review.</i>
Vehicle Safety Test	HRHJV recently conducted required fire resistance testing on the floors and ceilings of the vehicles. The required resistance was for the floors to last for twenty minutes before failure (based on time required to evacuate a vehicle in an emergency). The floors failed at 14 minutes. However, HRHJV believes the testing conditions for this test did not meet the standards prescribed. The heat rise was more accelerated than those defined for the test, according to HRHJV. This could be a significant issue for HART and HRHJV if the cars do not pass this test. HRHJV has completed fabrication of all the car bodies. The floor and ceilings are integral to car structure, and cannot merely be replaced. HRHJV has not submitted a corrective action plan at this time.	HRHJV has committed to re-testing the vehicles. The 80 <sup>th</sup> car will be cut in half and subjected to re-testing in Italy (the original test was performed in San Antonio, Texas). <i>The re-test is planned for May 9, 2019 for the floor and May 17, 2019 for the ceiling. HRHJV is also doing an earlier test on a small sample the week of April 15, 2019 to try to replicate the results of the Texas test in Italy. It will then do a small sample test with the correct testing criteria to see if their supposition that the inaccurate testing procedure caused the original sample to fail. The total cost of retesting will be borne by HRHJV.</i>

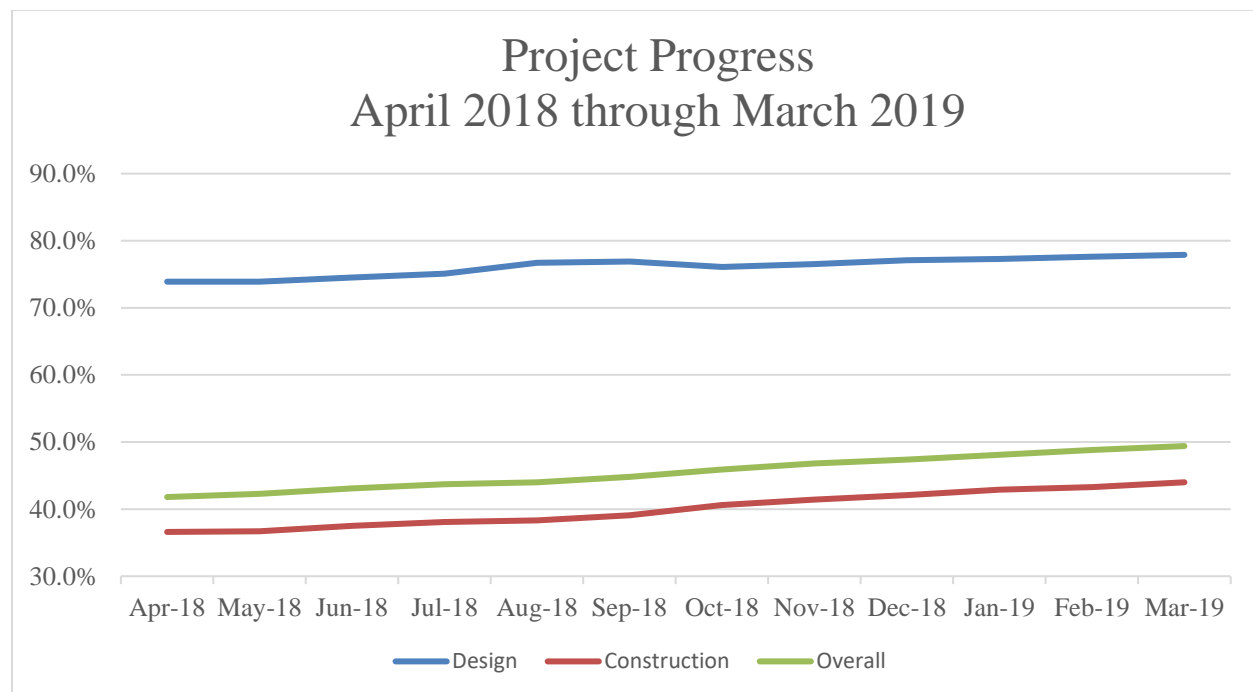
## 2.0 BODY OF REPORT

### 2.1 Project Status

The following table shows project progress as reported by HART against the current EAC and target RSD. *The percent complete is through the end of February 2019, a point in time; however, the chart following the table shows how the project progressed month-to-month for the last 12 months.* Since the “dip” in April 2018, the project has made slow but steady progress from 41.8% to 48.9% complete. Section 2.1.2 and Appendix B of this report provide the status of the current design and construction contracts.

Project Progress	Reported Completion	Planned Completion*
Overall	49.4%	50.7%
Design	77.9%	72.6%
Construction	44.0%	46.2%
*Based on HART’s S-curve late plan with data as of December 28, 2018.		

The following graph shows the steady progress made on the project over the past year.



#### 2.1.1 Status of Procurement

- MI 940 – Traction Power Backup Generators – Contract was awarded to Genertek Power Industries. The NTP is pending the issuance of an acceptable Performance Bond. HART reported at the February 2019 oversight meeting that it was not able to secure an acceptable Performance Bond from Genertek; accordingly, Hart is moving to negotiations with the second bidder. No agreement could be reached with second bidder; therefore, a new procurement must be started. *HART is re-evaluating the scope of the generator procurement. The generators are not required to begin interim service.*

- MM 964 – Real Estate Mapping and Surveying – This is an expiring contract that has exhausted all of its renewal options and must be re-bid. The procurement for this contract began on February 15, 2019. *The Statements of Qualifications were received on March 15, 2019, and are being evaluated.* The award date is anticipated for May 1, 2019.
- DB 550 – City Center Guideway and Stations – P3 has been selected for this segment, and a Part 1 RFP was issued on September 28, 2018. Per Addendum 6, Part 1 proposals are due April 12, 2019. Part 2 of the RFP will be issued as a draft on May 3, 2019. These dates are included in the summary P3 milestone table below as amended by Addendum 6. Although, the Part 1 proposals have been delayed four months, the revised schedule anticipates that the NTP will only be delayed approximately two months to February 22, 2019. *Note, HART received proposal(s) on April 12, and will proceed to PART 2 of the RFP.*

P3 TIMETABLE	
Activity	Date
HART Board approve the P3 delivery plan for CCGS and PHGTC	09/27/2018
HART issue RFP Part 1 (qualifications)	09/28/2018
Pre-Proposal Conference	10/15/2018 (1:30 p.m. HT)
RFP Part 1, Notice of Intent to Bid	12/7/2018
Pre-Proposal Conference #2 (for discussion)	3/15/2019
RFP Part 1, Deadline for requests for clarification	3/15/2019
RFP Part 1, Issue final addendum for RFP Part 1	3/29/2019
RFP Part 1, Qualifications proposals due	4/12/2019 (2:00 p.m. HT)
RFP Part 2, Issue DRAFT RFP Part 2	5/3/2019

- HART indicated it could develop a procurement that allows for DB contracting of CCGS & PHGTC if it is determined during P3 negotiations that Design-Build-Finance-Operate-Maintain (DBFOM) is not feasible due to financing costs or O&M considerations. This would allow HART to evaluate and award a DB contract to one of the proposing P3 teams. *AT the request of the HART Board, HART is reviewing the options for an alternative delivery method to mitigate an unsuccessful P3 procurement.*
- HART's schedule for NTP for the P3 contract is approximately six months later than the original schedule for the proposed DB contract. *HART continues to believe the P3 approach will result in gaining back all of this delay; however, if HART does resort to a DB approach, the PMOC believes it is very likely that the RSD will be delayed.*



## 2.1.2 Status of Primary Construction Contracts

### SECTION I – West O’ahu Farrington Highway Contracts – East Kapolei to Pearl Highlands

- **DBB-171** – West O’ahu Station Group Construction Contract – Nan, Inc. contractor
  - *Contract work is 75.6% complete. Late Plan completion is 95.9%.*
    - *East Kapolei Station progressed from 71% to 72% complete.*
    - *UH West O’ahu Station progressed from 79% to 82% complete.*
    - *Ho’opili Station progressed from 77% to 77% complete.*
  - *Earlier schedule updates indicated the contract to be 11 months behind plan with an anticipated substantial completion date of June 2019. HART’s March 2019 Progress Report indicates the contract is now eight months behind the revised schedule, but the new substantial completion date is November 2019 (this is due to a warranted time extension). HART continues coordinating with Nan, Inc. to identify station access dates for the CSC contractor, HRHJV.*
  - *Canopy erection is a key issue on this contract. Canopy arms have been erected at the East Kapolei Station and at UH West O’ahu station. Remaining canopies are expected to be complete on all three stations by May 2019 (this is an improvement of one month from the previous report).*
- **DBB-271** – Farrington Highway Station Group Construction Contract – Hawaiian Dredging Construction Company (HDCC) contractor.
  - *Physical completion progressed from 82.4% to 85.0%. Late Plan completion 100%.*
  - *The December 28, 2018 schedule remains eight months behind. The substantial completion date shows September 2019, but the anticipated erection for the last canopies does not occur until September 2019. Unless a substantial improvement can be made on the canopy arm delivery, then this is an unlikely schedule. Canopy fabrication and installation completion for West Loch, Waipahu Transit Center, and Leeward Community College stations remain August, June, and September 2019, respectively.*
  - *HART has requested a “To Go” schedule to determine what would be required to complete the contract in time to maintain the interim opening.*
  - *HDCC submitted a claim for 482 days of compensable delay. The parties agreed to submit their dispute to mediation, which first occurred on September 5 & 6, 2018. A second mediation occurred on November 1, 2018. HART and HDCC settled this claim for \$7,500,000 (the original claim amount requested was \$14,460,000). HART executed three change orders in January (including the aforementioned delay claim) for a total of \$7,955,852. A small change order was issued in February for \$182,247. The revised total contract value is \$90,640,000. The original contract value was \$78,999,000.*

- **DBB-602** – UHWO Station Temporary Park & Ride and Campus Road B
  - *Physical completion progressed from 46.3% to 55.2%. Late Plan completion is 79.8%.*
  - *The February 22, 2019 schedule update indicates the schedule remains 4 months behind.*

## **SECTION II – Kamehameha Highway Contracts – Pearl Highlands to Aloha Stadium**

- **DBB-371** – Kamehameha Highway Station Group Construction Contract – Nan, Inc., contractor
  - *Physical completion progressed from 57.0% to 59.0%. Late Plan physical completion is 96.2%.*
  - *The work remains 4 months behind the current contract completion date. Note, HART is reporting a substantial completion date of September 2019, while the last canopy is not expected to be erected until November 2019. HART is coordinating with Nan and HRHJV, the Core Systems contractor, to meet HRHJV's schedule for access turnover.*
- **DBB-701** – Kamehameha Highway Resurfacing (KHR), Road & Highway Builders, LLC (RHB), contractor.
  - *Physical percent complete is 43.4%; Late Plan completion is 38.4%. Project is on time.*
  - *NTP #2 was issued on January 9, 2019.*
  - *NAN is coordinating this work with the potholing required for the 138kV relocation.*

## **SECTION III – Airport Guideway and Stations (AGS) – Aloha Stadium to Middle Street Transit Center Station**

- **DB-450** – Airport Guideway and Stations (AGS) (5.2 miles / 4 stations) – Contractor is Shimmick/Traylor/Granite, JV (STG).
  - *Stations: Pearl Harbor Navy Base, International Airport, Lagoon Drive, Middle Street Transit Center.*
  - *Physical percent complete progressed from 39.5% to 40.9%. Late Plan completion is 43.2%.*
  - *Contract substantial completion date is May 2021. Contract remains on time.*
  - *Overall design is at 99% complete.*
  - *Station Foundation work is continuing on all stations except Airport and Middle Street. Trestlework at Mauniua Stream has been completed.*
  - *HART, STG, and HECO are working together to complete the required infrastructure and electrical design to complete electrical construction by zone in order to meet STG's schedule; HART and STG hold weekly meetings with HECO.*

- HECO designs have been progressing to meet just in time needs for the construction schedule. *HART is concerned that this will become an issue.*
- STG completed and tested the first overhead Gantry Crane and began segment erection in November 2018. HART anticipates that STG will complete two spans per week. AGS Construction continues to progress. The status as of February 28, 2019:
  - *Shafts – 135 of 225 (60.0%) (+3) are complete.*
  - *Columns – 101 of 232 (43.5%) (+6) are complete.*
  - *Segment casting – 1356 of 2,703 (50.2%) (+94) are complete.*
  - *Spans Stressed – 15 of 211 (7.1%) (+7) are complete.*
  - *Spans Grouted – 11 of 211 (5.2%) (+6) are complete.*
- *The second Gantry crane has arrived and STG is assembling it. Segment erection is scheduled for mid-April 2019.*
- A monitoring well at the airport showed high concentrations of a contaminant. This caused work to stop in this area (stoppage lasted approximately one month). *This caused the contractor additional costs, and a change order will be negotiated.* Additional wells showed water free of contaminant and work recommenced. DOH has now released seven drilled shafts to continue due to clean water samples
- *Grouting of spans is occurring within the required two weeks period from post-tensioning (this was an issue on the west side guideway, resulting in a tendon monitoring plan).*

#### **SECTION IV – City Center: Middle Street Transit center to Ala Moana Center**

- **DBB-511** – City Center Utilities and Roadway (CCUR) – Nan, Inc. contractor.
  - Contract is a unit priced, task order contract intended to relocate utilities ahead of the CCGS contract. Contract was awarded on May 4, 2018 for \$400 million.
  - Projected completion of relocation work is February 2022; contract substantial completion date is May 2022;
  - Agreement reached with HECO to allow micro tunneling along Dillingham for 138kV lines. Open trench still required for 46kV lines.
  - Issuance of Trenching permits and Road Use permits has been delayed and has become a concern. The City and HART personnel are working together to resolve this delay, and the process is improving.
  - AECOM completed design of wet utilities, and continues on balance of dry utilities. Design was anticipated to be 100% complete in March 2019; due to redesign to miss utilities along Dillingham Boulevard the design is now anticipated to be completed in September 2019.
  - *Although the February report listed this contract as on time, the schedule report noted that delays to the CCUR have put it on the near critical path. However, the CCUR team has been making progress that does not calculate accurately in the progress calculation. The team has found avoidance opportunities, and determined that some utilities have not needed relocation that were previously believed to need*

*relocation. These items do not show up in the calculation as completed, because work was not required to be accomplished. HART is investigating methods to better reflect the progress in upcoming months.*

- A design “TIGER” team consisting of AECOM (EOR), Stantec (CEI), Nan (CCUR contractor), and HART is operating to speed finalization of the design effort focusing on specific zones and task orders. To date the team has eliminated seven planned utility relocations that it projects will save over \$100 million in construction costs and several months of work. The TIGER Team continues to develop these alternative solutions. These avoidance designs require leadership approvals and some are still pending. All approvals have been achieved for the Dillingham Boulevard changes to be finalized. *Final determination for making this change is expected by mid-April 2019.*
- **MI-900** – Fare Collection System Contract – Innovations in Transportation, Inc. (INIT) is the contractor.
  - *Contract is approximately 34.6% complete (no change from last month). Late Plan completion is 52.6%. The work is 12 months behind plan. The Field Integration Test (FIT) originally scheduled for April 2018 is delayed due to an issue with cash reconciliation software. All necessary key components for the Pilot were completed with FIT as of October 31, 2018. The pilot was launched on December 1, 2018, and it is anticipated to be completed by the end of May 2019.*
- **MI-930** – Elevators and Escalators Manufacture-Install-Maintain (MIM) Contract – Schindler Elevator Corporation is the contractor.
  - *Contract is approximately 33.1% complete. Late Plan completion is pending a determination of access dates; and, as a result, HART could not determine the extent of delay.*
  - *Escalators #1, #2, #3 and, #5 at Pearl Highlands have been installed.*
  - *The elevator installation work at UH West O’ahu has restarted. Elevators #1 and #3 restarted in December, 2018 and are now complete. Elevator #5 was delivered in January and should be completed by the end of April 2019.*
  - *A revised baseline schedule will need to be prepared at a later date once the P3 contracts for the east portion of the guideway are awarded.*
  - *As of February 2019, all equipment for the nine western stations is either on the island, in transit to Hawaii, or being completed with a firm ship date.*

### **2.1.3 Status of Core Systems Contract (CSC): DBOM-920 – Hitachi Rail Honolulu Joint Venture (HRHJV) is the contractor.**

- *Contract is approximately 61.1% complete. Late Plan completion is approximately 51.6%.*
- *HART Issued a Safety Stand Down Order on February 12, 2019 for HRHJV testing involving train movement and 3<sup>rd</sup> rail activities. HRHJV experienced several safety issues during January that led to the Stand Down. HRHJV has met HART’s requirements for training and an updated Testing and Inspections Rule Book. HART lifted the Stand Down on March 15, 2019. The HRHJV Construction Safety and*

Security Manager continues to be filled on an interim basis by Bob Davis. *HRHJV identified an acceptable candidate in March; however, the candidate did not accept the position. HART has extended the interim status for Bob Davis until the end of June 2019.*

- Most design is complete with the exception of Communications, which is delayed. Lack of resources within HRHJV and its communications subcontractor, Nokia, have contributed to the design delay. HRHJV and HART have agreed to replace most of Nokia's responsibilities with respect to Communications with either HRHJV staff or with another sub-contractor. HRHJV stated that this transition will take approximately 8 to 10 weeks. This will result in a delay in getting the yard fully operational to May or June 2019.
- *HRH has instituted a COMMS Task force, and has been meeting weekly. HRHJV has put together a plan for completing the communications design and installation. HRHJV has assigned specific staff for the effort and has them on-site. This is a key activity for HART's interim opening. **COMMS is on the critical path for the IRSD1.***
- *Although HART indicated last year that a key milestone for achieving an interim Revenue Service Date 1 (IRSD1) of December 2020 was to have the yard operational by December 2018, HART has not chosen to delay the IRSD1 date. Moreover, the HART Executive Director continues pushing for an acceleration of two months from December to October 2020. The PMOC remains concerned that quality and safety may be at risk as a result of pressure to meet an accelerated delivery date on top of additional delays to yard completion. The PMOC, in coordination with the SSO will continue to monitor this issue closely.*
- During the February Progress meetings, HART revealed that the Executive Director challenged the team to accelerate the interim opening to October 2020. However, the contract settlement agreement just reached with AHJV calls for the Interim RSD to be December 2020. HART did provide a schematic of the activities needed to get the project ready for an October 2020 IRSD1; however, that schedule assumed that yard would be functional by March 30, 2019. *At the April Progress meeting HART amended the schedule to show the MSF Yard ATC at the end of June, but is still pursuing an October 2020 IRSD1. The PMOC remains highly skeptical that this date is achievable. The schematic for the early opening now shows functional track testing being delayed to 4<sup>th</sup> quarter 2019.*
- HART has announced a settlement of the HRHJV delay claim for \$160 million. Finalization of this settlement was approved by the HART Board in February. Additionally, with the settlement of that claim, HART has issued an addendum to the P3 RFP Part 1 to direct inclusion of HRHJV as the core systems and operations subcontractor. *Note Operations subcontract would only be required through 2030, five years after HART's projected December 2025 RSD.*
- HECO identified a power quality issue with HART traction power loads. HART is pursuing the procurement of Static Synchronous Compensators to address this issue. This may require some environmental analysis/clearance.
- AHJV continues to have construction deficiencies. Specifically, HART has identified issues with TES cabling and connections, and COMM work at the MSF. AHJV has responded by assigning more work to Mass Electric.

- Fixed Facility contractors are not meeting construction access dates.
- *The following occurred in February 2019:*
  - Construction –
    - MSF communication equipment installation continues. Work is near completion. HART and AHJV have agreed to reassign much of the work being performed on Communications by Nokia to their own forces or a new sub-contractor. HART stated that this will result in an 8 to 10 week transition period.
    - *ATC wayside equipment installation at UH West O’ahu completed, and continues at Ho’opili.*
    - Optical fiber cable pulling from yard to mainline continues.
    - Commenced PSGS installation at East Kapolei Station.
  - Testing –
    - *MSF yard testing to get the yard operational is delayed. HART estimates the yard will become operational by end of June 2019.*
    - MSF SCADA testing continues.
    - Ho’opili TPSS, LCC GBS and Pearl Highlands TPSS are partially commissioned; awaiting HECO power to complete.
  - Light Rail Vehicles (LRVs) –
    - NFPA 130 Fire test for vehicle floor and ceilings failed at a testing facility in Texas. *Re-test to take place in Italy on May 9 and May 17, 2019 for the floor and ceiling, respectively.*
    - HART has stopped delivery of trains and payments for vehicles until the fire test is resolved.
    - *Dynamic testing of Train #1 is ongoing*
    - *Train #2 is continuing PV/ATC test on the yard test track.*
    - Train Delivery Schedule for the first ten of 20 trains: Note, that delivery of trains to Hawaii has been suspended pending resolution of NFPA Test.

Train #	Forecast Ship Date from Pittsburg, CA	Forecast Delivery to HART’s MSF	Actual Delivery
#1	Shipped	Delivered	16 April 16
#2	Shipped	Delivered	23 May 17
#3	Shipped	Delivered	6 August 18
#4	Sep 2018	Nov 2018	1 December 18
#5	Oct 2018	January 2019	January 19, 2019
#6	Feb. 2019	Feb.2019	March 1, 2019
#7	Apr. 2019	Apr. 2019	<i>delayed</i>
#8	May 2019	May 2019	<i>delayed</i>
#9	TBD	TBD	
#10	TBD	TBD	

- HART performed a post-delivery Buy America audit of LRVs in June 2018. The Post-delivery audit of LRVs shows that the vehicles are non-compliant. AHJV has identified the LRVs’ foreign made interior panels as the problem. Panels will be replaced/repared, and then a re-audit and calculation will be done to confirm the vehicles are Buy America compliant. HART suspended payments on the LRVs until this issue is resolved. Furthermore, HART stopped

shipment of cars from Pittsburg, CA to Honolulu until the vehicles are brought into compliance. HART provisionally accepted the Hitachi Corrective Action Plan. Raul V. Bravo & Associates (performed the original audit) are reviewing again to assure that the proposed solution brings the vehicles into compliance. Final report is being finalized (*note, the report has been imminent since late February 2019*).

#### 2.1.4 Real Estate Acquisition

- Risk that right-of-way may not be available for the project remains significant although HART is making some progress. The schedule for overall completion of the real estate function is now estimated at December 2019. However, as noted below in the discussion of the Watumull parcel, the December 2019 date is likely not achievable at least for the Watumull parcel. These delays will affect the availability of properties to the P3 contractor and are currently causing some minor delays with utility work.
- *HART replaced the Director of Real Estate with Dylan Jones. Mr. Jones started on April 10, 2019, but was not available for the Progress meetings in April. The PMOC has scheduled a breakout session for Real Estate during the week of the FTA/HART Quarterly meetings. The PMOC has requested a copy of Mr. Jones's resume for review.*
- HART has split the Center City Appraisals into two groups; CCGS Slate 1 and CCGS Slate 2. All appraisals for both groups are complete and FTA concurrences have been received. However, two parcels initially appraised remain outstanding. HART approved the Otani property for a conversion from a partial take to a full take due to considerations for safety, access, and severity of the damages. *HART received FTA approval on its formal request for Post-ROD approval of a full take. A project re-design along the Pacific Guardian parcel would significantly reduce the impact on the building. HART approved this change, and a new appraisal will be completed once the new design is finished, and new maps and legal descriptions can be finalized.*
- HART has filed eminent domain authority for Parcel ID (PID) 433 HECO (Iwilei). However, HECO has filed a court challenge over HART's authority to use eminent domain on the utility property. This issue is related to the potential impact to the HECO substation. HART is currently engaging HECO in discussions to resolve the legal challenge and move ahead with this parcel. HART indicated that there was mutual agreement to do so. *The Iwilei property has become an issue again. This is a condemnation of a HECO property. HECO contested the condemnation based on which agency has the higher public purpose. Previously, HART and HECO were making progress toward an agreement; however, an incident involving a HART contractor has caused HECO to reconsider the property impact on the facility. This effort has now moved to discussions with HART and HECO lawyers (HART has enlisted outside counsel). The PMOC will continue to monitor the situation. This is part of the City Center section of the project, and could become part of the critical path for full RSD, if acquisition continues to be delayed.*
- Lee Property – The Lee property was acquired by eminent domain, but as part of the tentative settlement, the court granted the Lees an opportunity to environmentally mitigate the property. The Lees have not yet completed this work. HART has asked the court to order the work completed or permit HART to use the deposited acquisition

funds to do so. The construction schedule is not being impacted by the delay at this time. Additional court action is still a possibility.

- HART in cooperation with the City (DTS) has prioritized the acquisition of PID 493 Watumull property. This property is the location of the future Ala Moana Station (east end of the currently planned alignment). It is also the site for a future bus transit plaza for DTS. This is a joint acquisition property. Presently, DTS has been tasked with acquiring the property and then transferring a portion to HART for the Ala Moana Station. *Originally, HART was tasked to relocate the 19 tenants associated with this property; however, at the April Progress meeting, HART stated that DTS will be doing the relocation, also.* Should DTS and Watumull not come to terms on a price, DTS could use Eminent Domain authority, but only if the use of Eminent Domain is mutually agreed between the City and the owner. HART stated that the owners are receptive to resolving this issue through the use of Eminent Domain. HART and the property owner are working on an agreement to define this path as an acceptable solution. *DTS is currently appraising the property. HART Will be providing details to FTA on the DTS plans for acquisition and relocation.* HART estimates the relocation work will take approximately 18 months. *Due to the complexity of this acquisition and relocation, HART has recently added this item to the risk register with a potential schedule impact of 22 months, and a cost exposure of \$25.9 million.*
- International Express – Negotiations are continuing for a resolution of this parcel. The project earlier provided the business a notice to vacate. Subsequently the business leased a parcel of land and incurred various professional services costs to develop the new site as their replacement. It now appears that the business can remain at the present site. HART has determined that they likely must pay the incurred costs since they had directed the business to move from the site. The extent of these reimbursements are being negotiated. Additionally, since HART has acquired the project site, it will need to re-convey the property to International Express, less the interest it must retain for project use. This is a disposition, so working through the FTA is the proper course. HART is working through the details of the agreement before submitting to FTA for concurrence.
- Howard Hughes –The parcel referred to as “Howard Hughes” consists of various land tracts under a common ownership. The property is being redeveloped as Ward Village, a mixed-use high-quality development. Certain of the residential towers are completed or underway along with some supporting commercial areas. This group of tracts represents the largest real estate dollar-risk on the project. Howard Hughes has informally discussed valuations as high as one-hundred million more than the present offer, although no formal demand has been stated. HART has formally initiated negotiations and is asking the court for an order of possession since negotiations are not proving successful. HART has attempted to accommodate the owner’s wishes as to design and the type of takings. The takings will be in the form of permanent easements to permit the owner to retain Floor Area Ratio development rights and use the easement areas for other zoning purposes. Because the parties could not come to terms on permanent easements, HART filed for taking by eminent domain on this property, and deposited \$13.5 million into an escrow account. Presently, the court has upheld the Order of Possession and rejected Howard Hughes Corporation challenge to the condemnation. HART anticipates an appeal but is working to resolve the matter to avoid further litigation.



- D.R. Horton – D.R. Horton, a large-scale developer, owns several hundred acres proposed for mixed-use surrounding the West Oahu Station. The project anticipates Horton conveying the needed property rights for little or no consideration. These rights will address the needed real estate for the station and guideway. However, DR Horton has several demands prior to transfer. The ongoing construction at the site continues under terms of a right of entry executed by Horton. Final resolution of the issues delaying a transfer of fee and easement interests is anticipated in the next several months.
- The single biggest hurdle to resolution of this matter involves land exchanges for the permanent commuter parking lot adjacent to the station. The parking lot situation is complex: The State of Hawaii through its Department of Land and Natural Resources, DLNR, owns the land which HART will lease to construct the permanent parking lot. However, DNLR will only lease to HART if DLNR receives certain adjacent parcels from Horton. DLNR has asked HART to facilitate the transactions necessary to meet its demands. The transfers and development will likely mean there will be an interim configuration of the parking lot, and then a final layout as the development of the property progresses. Another unresolved issue involved in the transaction is which party will bear the cost to bring utilities to the property. Until all of these matters are negotiated, the lease and transfer of other interests cannot occur. HART cannot condemn the DLNR property, so it must develop a solution.
- DLNR wishes to retain airspace rights over the UH West O’ahu parking lot for its future development. DLNR requested clarification on federal interest that will apply to the future development. HART is drafting a letter to FTA with HART’s understanding of federal interest for confirmation.
- HECO – Design of the undergrounding 138kV line along CCGS is ongoing and must be sufficiently developed to identify additional parcels that are needed. The project has agreed to various utility adjustments with the Hawaii Electric Company (HECO) and will require substitute easements to allow the placement of the conduits and wires. At various times, this was estimated to be up to one-hundred easements. The number has now been reduced, and based on the latest information, it appears that HART will acquire only five new easements on behalf of HECO. *HART stated that the number of parcels for the 138kV relocation is evolving as the design progresses, and may increase.*

### **2.1.5 Third Party Agreements and Coordination**

Appendix F includes a table with the status of all pending third party agreements.

### **2.1.6 Utilities**

Following are updates related to Hawaiian Electric Company (HECO):

- Permanent Power for TPSS sites is becoming a significant schedule issue for the interim opening. HART made significant progress with HECO in January and February. The key stations for initial testing; UH West O’ahu, East Kapolei, Waipahu (energized), and Ho’opili (energized) will be energized by the end of March.

- HART must enter into an agreement with HECO over a power quality issue that was mentioned in the Core Systems Section of this report. HECO identified a power quality issue with HART traction power loads. HART is pursuing the procurement of Static Synchronous Compensators (STATCOMS) to address this issue. This may require some environmental analysis/clearance. HART anticipates finalizing this MOU between HECO, HART and DTS (DTS must be a part of the agreement because it will extend into operations) by April 30, 2019.
- HART and HECO have executed Construction Services Agreements for AGS and CCGS. HART's contractors must perform the relocation work for the 138kV lines due to unavailability of HECO crews. HART will bear all costs of the relocations. This work is progressing; however, HECO designs are being completed on a just-in-time basis. HART is concerned the lack of float in the design schedule could become a problem. *Further discussion of this item is covered in the Core Systems section 2.1.3 of this report.*

## 2.2 Environmental Mitigation Measures

- Proposed Design Changes/Refinement – HART is considering several proposed design refinements that may require additional environmental review. FTA and HART hold meetings, as needed, to discuss the status of any potential changes. HART has submitted information on each proposed change for FTA to determine the level of documentation required to assess impacts and subsequent mitigation measures:
  - LCC TPSS / HECO Service Vehicle Parking – *FTA approved the Post-ROD for this item.*
  - *Otani Parcel Right-of-way and TPSS 21 Substation relocation received FTA approval for a full take.*

## 2.3 Project Management Plan (PMP) and Sub-Plans

HART sent the PMP and QMP to FTA and PMOC on December 19, 2018. Following is the status of all management plans:

HART Management Plans			
Plan	Rev.	Date Approved	Status
Before-and-After Study Plan	1.0	January 4, 2018	<i>Approved/Baselined</i>
Bus Fleet Management Plan (BFMP)	4.0	January 4, 2018	Revision due 3/29/19
Buy America Plan (BAP)	2.0	December 6, 2017	Revision due 4/15/19
Configuration Management Plan (CFMP)	4.0	February 28, 2018	<i>Approved/Baselined</i>
Construction Management Plan (CMP)	4.0	December 11, 2017	<i>Approved/Baselined</i>
Construction Safety and Security Plan (CSSP)	5.0	December 7, 2017	<i>Approved/Baselined</i>
Contract Packaging Plan (CPP)	6.0	December 13, 2017	<i>Approved/Baselined</i>
Force Account Plan	2.0	December 7, 2017	Revision due 3/29/19
HART Procurement Manual	0.0	December 13, 2017	Revision due 4/15/19
Interface Management Plan (IMP)	4.0	January 12, 2018	<i>Approved/Baselined</i>
Mitigation Monitoring Plan (MMP)	3.0	January 4, 2018	<i>Approved/Baselined</i>
Operation and Management Plan (OMP)	1.2.0	February 28, 2018	<i>Approved/Baselined</i>
Preliminary Hazard Analysis (PHA)	3.0	December 7, 2017	<i>Approved/Baselined</i>

HART Management Plans			
Plan	Rev.	Date Approved	Status
Project Financial Plan (PFP)	0.0	December 24, 2012	Revision due 3/29/19
Project Management Plan (PMP)	7.0	December 10, 2018	Approved/Baselined
Public Involvement Plan (PIP)	2.0	December 6, 2017	<i>Approved/Baselined</i>
Quality Management Plan (QMP)	4.0	November 9, 2018	Approved/Baselined
Rail Activation Plan	2.0	February 8, 2019	Approved/Baselined
Rail Fleet Management Plan (RFMP)	2.0	December 11, 2017	<i>Approved/Baselined</i>
Real Estate Acquisition Management Plan (RAMP)	7.0	January 23, 2019	Approved/Baselined
Risk and Contingency Management Plan (RCMP)	3.0	March 6, 2018	<i>Approved/Baselined</i>
Safety and Security Certification Plan (SSCP)	7.0	January 30, 2019	Approved/Baselined
Safety and Security Management Plan (SSMP)	8.0	January 30, 2019	Approved/Baselined
Sensitive Safety Information Plan	1.0	December 13, 2017	<i>Approved/Baselined</i>
Staffing and Succession Plan	6.0	May 25, 2012	<i>Approved/Baselined</i>
System Integration and Test Plan (SITP)	2.0	December 7, 2017	<i>Approved/Baselined</i>

## 2.4 Management Capacity and Capability (MCC)

- HART has consistently experienced turnover of key management staff over the life of the project. Two significant vacancies occurred in January 2019. The Chief Financial Officer, Robert Yu, and the Director of Transit Property Acquisition and Relocation, Richard Lewallen, left HART. *HART filed the Director of Transit Property and Relocation with Dylan Jones. Mr. Jones started working at HART on April 10, 2019.* The following table shows the status of recruiting to fill several management positions.

HART Project Management Positions to be Filled	
Position	Status
Chief Financial Officer	<i>Candidate recommended to Board for concurrence.</i>
Deputy \Director of Contracts Administration	Recruiting/Interviewing
Construction Claims Manager	<i>Filled with Dave Diamon.</i>
Grants Manager	On-hold, pending CFO hire.

## 2.5 Project Cost

- It is important to understand that HART is managing the project to a smaller budget, HART's Estimate at Completion, than that directed by FTA in its September 21, 2018 letter to HART. FTA directed that HART add \$134 million to total contingency, which HART did in its 2018 Recovery Plan. The following table lays out the two budgets. The biggest differences between the two are in contingency and financing amounts. It is also important to understand that FTA has not modified the Full Funding Grant Agreement, the formal agreement between the federal government (FTA) and the City and County of Honolulu.

Project Cost Summary (\$ in millions)			
Budget Category	2018 Recovery Plan Budget	HART's Estimate at Completion Budget	Difference
Base Cost without Contingency	\$7,312	\$7,289	\$23
Total Contingency	987	876	111
Total Project Capital Cost	8,299	8,165	134
FFGA Finance Charges	635	584	51
This Subtotal Project Cost	8,934	8,749	185
Post-RSD Finance Charges	254	271	-17
Total Project Cost	\$9,188	\$9,020	\$168

- Public-Private Partnership (P3) – HART accomplished the following to confirm the recommendation to change to a P3:
  - HART approved P3 at its Board meeting on September 27, 2018.
  - HART has procured a Legal Advisor through a July 10, 2018 contract award.
  - HART procured a Financial Advisor by awarding a contract on October 24, 2018.
  - HART must incorporate the P3 scenario into its MPS to assess impacts to the RSD under the P3 approach as compared to a DB approach for CCGS and the PHGTC. HART issued RFP Part 1 for a P3 contract on September 28, 2018. Milestone dates for the P3 approach are summarized in Section 2.1.1 of this report. The adjusted NTP for the P3 versus the original DB contract has been offset by an assumed efficiency achieved by removing the contract interface between the DB and the Core Systems contract. HART stated that it does not intend to adjust the construction scheduling in the MPS prior to receiving P3 proposals in 2019. HART has revised this position is currently developing a construction schedule for the CCGS section. *The Independent Cost Estimate and Schedule for the CCGS will be delivered to the PMOC on April 18, 2019.*
  - HART has indicated a P3 procurement could contain language that allows HART to award a DB contract to one of the proposing P3 teams if it is determined that the Design-Build-Finance-Operate-Maintain (DBFOM) approach is not feasible due to financing costs or O&M considerations.
  - DTS informed the PMOC that it issued an NTP to Jacobs to develop a bottoms-up estimate for the O&M effort. This effort should be completed in the first quarter of CY 2019. HART stated at the February Progress Meeting that a planning level estimate has been updated for the O&M that is being refined.
- *HART expended \$60 million during February 2019, and has expended a total of \$3.551 billion through February 22, 2019.<sup>3</sup>*
- The table on the following page provides a comparison by Standard Cost Category (SCC) as well as expended amounts for the 2018 Recovery Plan Budget and HART's current Estimate at Completion (*Data as of February 22, 2019*).

<sup>3</sup> HART's March 2019 Monthly Progress Report, page 9.

SCC	Description	2018 RECOVERY PLAN BUDGET			HART ESTIMATE AT COMPLETION			Incurred
		Base Cost	Contingency	Total	Base Cost	Contingency	Total	
10	Guideway & Track Elements (Route Miles)	1,385,613,350	222,868,325	1,608,481,675	1,380,011,165	228,470,511	1,608,481,676	713,203,477
10.02	Guideway: At-grade semi-exclusive (allows cross-traffic)	17,378	0	17,378	17,378	0	17,378	17,378
10.04	Guideway: Aerial structure	1,243,170,339	214,668,325	1,457,838,664	1,237,568,154	220,270,511	1,457,838,665	635,836,835
10.05	Guideway: Built-up fill	0	0	0	0	0	0	5,054,744
10.06	Guideway: Underground Cut and Cover	0	0	0	0	0	0	(1,228,000)
10.08	Guideway: Retained cut or fill	142,425,633	8,200,000	150,625,633	142,425,633	8,200,000	150,625,633	
10.09	Track: Direct fixation							77,597,271
10.11	Track: Ballasted				0	0	0	2,394,373
10.12	Track: Special (switches, turnouts)				0	0	0	1,530,876
20	Stations, Stops, Terminals, Intermodals	740,278,879	91,423,195	831,702,074	731,689,828	100,921,120	832,610,948	151,451,038
20.01	At-grade station, stop, shelter, mall, terminal, platform	4,956,181	8,505,325	13,461,506	4,956,181	8,505,325	13,461,506	7,853,021
20.02	Aerial station, stop, shelter, mall, terminal, platform	548,219,008	54,496,453	602,715,461	550,867,020	52,757,315	603,624,335	125,055,674
20.04	Other stations, landings, terminal	0	0	0	0	0	0	0
20.06	Automobile parking multi-story structure	121,609,473	26,632,475	148,241,948	121,609,473	26,632,475	148,241,948	0
20.07	Elevators, escalators	65,494,217	1,788,942	67,283,159	54,257,154	13,026,005	67,283,159	18,542,343
30	Support Facilities: Yards, Shops, Admin. Bldgs.	100,806,854	0	100,806,854	100,806,854	0	100,806,854	120,057,692
30.01	Administration Building	0	0	0	0	0	0	231,250
30.02	Light Maintenance Facility	3,057,240	0	3,057,240	3,057,240	0	3,057,240	7,582,704
30.03	Heavy Maintenance Facility	64,479,556	0	64,479,556	64,479,556	0	64,479,556	46,295,366
30.04	Storage or Maintenance of Way Building	8,619,230	0	8,619,230	8,619,230	0	8,619,230	8,892,739
30.05	Yard and Yard Track	24,650,828	0	24,650,828	24,650,828	0	24,650,828	57,055,633
40	Sitework & Special Conditions	2,315,294,490	230,442,932	2,545,737,422	2,303,004,979	236,810,802	2,539,815,781	873,891,212
40.01	Demolition, Clearing, Earthwork	33,446,029	1,038,000	34,484,029	33,446,029	1,038,000	34,484,029	20,567,843
40.02	Site Utilities, Utility Relocation	784,993,474	97,126,874	882,120,348	775,373,621	99,740,085	875,113,706	210,927,995
40.03	Haz. mat'l, contam'd soil removal/mitigation, ground water treatments	33,829,683	515,000	34,344,683	33,829,683	515,000	34,344,683	7,916,637
40.04	Environmental mitigation, e.g. wetlands, historic/archeologic, parks	5,518,864		5,518,864	5,518,864	0	5,518,864	11,391,864
40.05	Site structures including retaining walls, sound walls	21,764,985	6,884,511	28,649,496	21,764,985	6,884,511	28,649,496	14,984,641
40.06	Pedestrian / bike access and accommodation, landscaping	14,744,276	500,000	15,244,276	14,744,276	500,000	15,244,276	2,326,146
40.07	Automobile, bus, van access ways including roads, parking lots	264,580,524	29,237,568	293,818,092	264,580,524	29,237,568	293,818,092	72,122,147
40.08	Temporary Facilities and other indirect costs during construction	1,156,416,655	95,140,979	1,251,557,634	1,153,746,997	98,895,638	1,252,642,635	533,653,939
50	Systems	313,983,939	16,033,668	330,017,607	317,420,648	17,049,727	334,470,375	142,586,154
50.01	Train control and signals	157,077,732	7,756,522	164,834,254	160,514,441	8,772,581	169,287,022	53,869,632
50.02	Traffic signals and crossing protection	3,172,131	598,725	3,770,856	3,172,131	598,725	3,770,856	98,000
50.03	Traction power supply: substations	32,396,808	0	32,396,808	32,396,808	0	32,396,808	15,400,610
50.04	Traction power distribution: catenary and third rail	37,120,977	0	37,120,977	37,120,977	0	37,120,977	27,086,531
50.05	Communications	65,390,742	0	65,390,742	65,390,742	0	65,390,742	38,652,404
50.06	Fare collection system and equipment	15,015,206	7,678,421	22,693,627	15,015,206	7,678,421	22,693,627	4,785,470
50.07	Central Control	3,810,343	0	3,810,343	3,810,343	0	3,810,343	2,693,507
CONSTRUCTION SUBTOTAL (10 - 50)		4,855,977,512	560,768,120	5,416,745,632	4,832,933,474	583,252,160	5,416,185,634	2,011,189,573
60	ROW, Land, Existing Improvements	254,835,574	106,789,890	361,625,464	254,835,574	106,789,890	361,625,464	160,803,105
60.01	Purchase or lease of real estate	171,400,000	101,500,000	272,900,000	171,400,000	101,500,000	272,900,000	136,999,386
60.02	Relocation of existing households and businesses	83,435,574	5,289,890	88,725,464	83,435,574	5,289,890	88,725,464	23,803,719
70	Vehicles	211,389,952	0	211,389,952	211,389,952	0	211,389,952	109,696,948
70.01	Light Rail	190,383,694	0	190,383,694	190,383,694	0	190,383,694	97,314,124

SCC	Description	2018 RECOVERY PLAN BUDGET			HART ESTIMATE AT COMPLETION			Incurred
		Base Cost	Contingency	Total	Base Cost	Contingency	Total	
70.02	Heavy Rail	0	0	0	0	0	0	0
70.05	Other	128,700	0	128,700	128,700	0	128,700	493,700
70.06	Non-revenue vehicles	14,371,344	0	14,371,344	14,371,344	0	14,371,344	11,889,124
70.07	Spare parts	6,506,214	0	6,506,214	6,506,214	0	6,506,214	0
80	Professional Services	1,989,870,725	97,630,139	2,087,500,864	1,989,870,725	98,190,139	2,088,060,864	1,264,125,546
80.01	Preliminary Engineering	54,753,840	0	54,753,840	54,753,840	0	54,753,840	195,640,038
80.02	Final Design	584,149,899	31,512,697	615,662,596	584,149,899	31,512,697	615,662,596	310,884,183
80.03	Project Management for Design and Construction	668,557,925	29,851,833	698,409,758	668,557,925	29,851,833	698,409,758	377,993,437
80.04	Construction Administration & Management	278,640,420	28,220,008	306,860,428	278,640,420	28,220,008	306,860,428	174,937,621
80.05	Professional Liability and other Non-Construction Insurance	99,340,000	4,000,000	103,340,000	99,340,000	4,000,000	103,340,000	45,284,642
80.06	Legal; Permits; Review Fees by other agencies, cities, etc.	99,928,698	3,768,439	103,697,137	99,928,698	3,768,439	103,697,137	37,111,497
80.07	Surveys, Testing, Investigation, Inspection	141,686,622	277,162	141,963,784	141,686,622	277,162	141,963,784	71,370,287
80.08	Start up	62,813,321	0	62,813,321	62,813,321	560,000	63,373,321	50,903,841
90	SUBTOTAL (10 - 80)	7,312,073,763	765,188,149	8,077,261,912	7,289,029,725	788,232,189	8,077,261,914	3,545,815,172
	Unallocated Contingency	0	221,738,087	221,738,087	0	87,792,279	87,792,279	0
100	SUBTOTAL (10 - 90)	7,312,073,763	986,926,236	8,298,999,999	7,289,029,725	876,024,468	8,165,054,193	3,545,815,172
100	Finance Charges	635,000,000	0	635,000,000	583,707,000	0	583,707,000	4,654,305
	<b>TOTAL FFGA Project Cost (10 - 100)</b>	<b>7,947,073,763</b>	<b>986,926,236</b>	<b>8,933,999,999</b>	<b>7,872,736,725</b>	<b>876,024,468</b>	<b>8,748,761,193</b>	<b>3,550,469,477</b>

## 2.5.1 Contingency

The November 19, 2018 Recovery Plan includes \$987 million in allocated and unallocated contingency. HART has stated that it is committed to honoring the budget established in their previously submitted Recovery Plan (September 2017). *Under that budget, HART's March 2019 monthly report, as of February 22, 2019, shows that HART has \$876 million total contingency available, which is no change from last month.*<sup>4</sup>

The PMOC has requested that HART begin reporting cost and schedule contingency with respect to minimum Drawdown curves. *At the March 2019 Progress meetings, HART shared updated drawdown curves relative to the actual contingency level. HART did not include drawdown curves at the April Progress meeting, nor did it include the curves in its March report as had been requested by the PMOC. HART stated that the updated cost and schedule curves were not ready for release.*

### **HART Recovery Plan –**

- HART's previous Recovery Plan dated September 2017 was reviewed by the FTA and PMOC. Since that date, the PMOC conducted a Risk Refresh Workshop on February 27, 2018 to assess HART's Recovery Plan budget and schedule. The PMOC's Final 2018 Risk Refresh Report, which was transmitted to HART on June 29, 2018, incorporated updated cost and schedule information that was provided by HART subsequent to the workshop. According to the Risk Refresh Report:
  - The revised RSD should be no earlier than September 2026, which represents the 65% confidence level in the Schedule Risk Model.
  - The predicted FTA model cost outcome at the 50% confidence level is \$8.299 billion. With \$855 million in finance costs, the total project cost would be \$9.154 billion Total Project Cost.
- HART continues to project an RSD of December 2025 with 11.5 months of contingency; although its Recovery Plan schedule update reflects an RSD of September 2026. HART indicated it will continue to manage the project to a December 2025 schedule and a budget of \$8.165B. Note, that the procurement schedule for the City Center section has been delayed a total of six months from the anticipated NTP, identified during the 2018 Risk Refresh. *The PMOC remains concerned that artificially accelerating the completion schedule will result in potentially higher costs and quality deficiencies.*

## 2.5.2 Funding Sources

During Special Session in September 2017, the State Legislature passed Act 1, which provides additional funding to the City and HART to complete the Project as originally scoped. On Tuesday, September 5, 2017, the Governor of the State of Hawaii signed Act 1 into law, which:

- Authorized an extension of the 0.5% General Excise Tax (GET) surcharge three (3) years from December 31, 2027, to December 31, 2030; and,
- Increased the state-wide Transient Accommodation Tax (TAT) by 1.0%, and dedicated the revenues from that increase to the capital costs of the Project.

---

<sup>4</sup> HART's March 2019 Monthly Progress Report, page 13.



- Decreased the State's administrative share of GET from 10% to 1% effective September 5, 2017.

Subsequent to the State action, the City Council adopted Ordinance 17-48 in support of the funding language in the bill, and the Mayor signed the same on September 7, 2017.

The following table shows funding sources at time of FFGA, at the time of the 2017 Recovery Plan, and as presented in the November 2018 Recovery Plan, which reflects the legislative action discussed above.

Sources of Funding Over Time			
Source	(\$ in millions)		
	2012 FFGA	2017 Recovery Plan	2018 Recovery Plan
Beginning Cash Balance	0	298	298
Interest Income on Cash Balance	7	3	0
General Excise Tax (GET)	3,358	5,873	5,990
Section 5309	1,550	1,550	\$1,550
Section 5307	210	0	0
All Other (ARRA \$4 million, the rest from interest income and rent)	4	4	13
Transient Accommodation Tax (TAT)	0	1,111	1,182
City Subsidy - HART Administration	0	160	214
Additional Funds FY2018- FY2030	0	54	0
<b>Total</b>	<b>5,122</b>	<b>\$9,053</b>	<b>\$9,188</b>

## 2.6 Project Schedule

The table below presents the grantee's target dates for key milestones of this New Starts Project as identified in its MPS.

Milestone Description	Finish Date
FTA Award Full Funding Grant Agreement (RSD)	January 31, 2020
Interim Revenue Service (East Kapolei Sta. to Aloha Stadium Sta.)	December 2020
Revenue Service Date (Segment 2/Full RSD)	December 2025/ September 2026

HART continues to report on the desired RSD of December 2025; however, the November 2018 Recovery Plan RSD is September 2026.

*The current MPS includes 350 days of contingency.* Note that this schedule accepts a delay in the anticipated P3 NTP of two months. HART chose to shorten the duration of the Start-up and Testing phase rather than use any schedule contingency.

The MPS requires revision because of re-packaging the remaining contracts into a P3 contract. HART has not incorporated details for a P3 scenario into MPS to assess impacts on the RSD. HART has adjusted its schedule to include P3 procurement activities, but has



assumed construction scheduling remains unchanged; similarly, HART is holding the same RSD until it gets new information from P3 proposers. HART stated it is creating a new schedule that includes consideration of the P3 delivery method. . *HART is expected to deliver its revised schedule and cost that consider the P3 delivery method on April 18, 2019.*

The following table is a look ahead for important project oversight activities:

Upcoming Project Oversight Activities		
Activity	Responsibility	Date
FTA Quarterly	FTA, HART and PMOC	May 1, 2019
HART Change Management Process Review	PMOC	May 15, 2019
<i>Meeting Monthly Progress Meeting</i>	<i>FTA, HART and PMOC</i>	<i>June 12, 2019</i>
<i>Rail Activation Readiness – MSF Automation</i>	<i>FTA, HART and PMOC</i>	<i>June 30, 2019</i>
<i>Monthly Progress Meeting</i>	<i>FTA, HART and PMOC</i>	<i>July10, 2019</i>

## 2.7 Quality Assurance/Quality Control (QA/QC)

- **WOFH Tendons** – HART reported at the January Progress Meeting that this issue is closed. A long term Tendon monitoring plan has been accepted. The PMOC received a copy of the plan March 13, 2019.
- **LRV Underframe** – A Material defect was identified during ultrasound testing of welds. The defect is with an aluminum extrusion part that makes up the vehicle under carriage. 8 of 27 frames require repair. AHJV instrumented LRV 1 with strain gauges during dynamic testing in June 2018 to confirm assumptions on the loads of the LRV frame. Six frames were returned to Italy for corrective action. The corrective action on the six is complete, and the LRVs will be shipped to Pittsburg, CA. The cars will be shipped upon resumption of trains being shipped to Honolulu because the Pittsburg facility has limited storage capacity. Two of the eight cars are in Honolulu. They will be sent back for corrective action in the first half of 2019.
- ***Passenger Vehicles Floor and Roof Design Verification Test Failures*** – *The Hitachi vehicles failed the required NFPA 130 (ASTM E-119) test. The vehicle will be re-tested in Italy on May 9 and May 17, 2019.*
- Six communications cabinets supplied by Nokia require retrofit to allow completion of testing and commissioning of the MSF yard. The retrofit should be completed in the first quarter of 2019.

## 2.8 Safety and Security

- Safety Certification
  - *West Segment is 57% complete.*
  - *East Segment is 22% complete (decrease from February report due to the addition of Certifiable items).*

- HRHJV Safety and Security Certification Manager was on site approximately 10 days once every 6 weeks. HRHJV continues to rely on Mr. Bob Davis to fill the role of both the Operations Safety Manager and the Construction Safety Manager. HART has emphasized that this is not a long-term solution. Several incidents occurred in January that highlighted the need for full time staff for both roles. After two derailments involving hi-rail vehicles and damage to train #3, HART sent a letter to HRHJV requiring a “safety stand down” on vehicle operations until the safety issues are addressed. *HRHJV had identified a candidate for a permanent replacement to begin in April 2019. This individual removed himself from consideration. Bob Davis has been extended to June 30, 2019.*
- Construction safety record continues to be positive. The incident rate is well below local levels. The rates for the last half of 2018 did exceed the national average, however.
- HART signed a contract with a Safety and Security Support Consultant; NTP was January 31, 2019.

## 2.9 Buy America

- In early 2018, HART commenced the post-delivery audit of rolling stock pursuant to 49 CFR Part 663. Raul V. Bravo + Associates (Raul Bravo) was retained to conduct the post-delivery audit of HRHJV delivery of its rolling stock. In November 2018, the audit findings showed that HRHJV failed to meet the Buy America domestic content requirements. Immediately thereafter HRHJV submitted to HART its corrective action plan to meet the Buy America requirements. HART has approved the corrective action plan. *Raul Bravo was tasked with confirming that the changes committed to in the Corrective Action Plan bring the vehicles into compliance. RBV+A reviews confirmed that the proposed solutions meet the requirements. Raul Bravo & Associates is finalizing the report. The report was scheduled to be completed by the end of February 2019. The report was not complete at the time of the April Progress meetings.*
- Ship America –MARAD has confirmed via an email to HART that AHJV has executed a contract with a US flag carrier. HART must continue to monitor AHJV to ensure all Ship America requirements are satisfied throughout the duration of the contract.

## 2.10 Operations & Maintenance (O&M)

- The City’s Department of Transportation Services (DTS) is developing an organizational chart and staffing plan. Their initial plan consists of a hybrid organization that pulls staff from each of the four DTS divisions and other City departments. The FY 2019 proposed budget includes 10 DTS positions dedicated to rail (these hires are advancing slowly). More critical, however, is staffing the new Deputy Director of DTS position who will be responsible for leading rail operations and maintenance. This will not occur until FY 2020. The PMOC, at the November 14, 2018 oversight meeting emphasized hiring this position as quickly as possible. Having this position start no earlier than July 1, 2019 is already later than desirable (this is even more critical with a goal to begin interim revenue service in October 2020). Any delay in recruitment and hiring would exacerbate this concern and jeopardize the interim RSD. DTS’ consultant Jacobs has hired a new HR resource who was previously with the City of Honolulu to help expedite the hiring plan. This includes two critical

- positions, the Operations Safety Manager and the Operations Manager (Deputy Director) position.
- The planned Interim Opening is scheduled for December 2020; with a challenge date of October 2020. The PMOC has expressed concern that the transition plan may not be adequately developed, and sufficient resources may not be allocated to support pre-revenue testing and revenue operations. In addition, the PMOC recommends that interim passenger service startup be treated as a first revenue service date and all required reviews and certifications including an OP-54 Readiness for Revenue Service review be completed. DTS and HART continue to work together to develop an MOU for the transition of O&M activities. HART and DTS committed to submitting the MOU to the PMOC by March 1, 2019. HART did not produce the MOU. According to HART, there are still a few technical differences in expectations between the two entities that need to be resolved. Both groups agree that cooperation is progressing well, despite their inability to complete the MOU. *The PMOC received the MOU on April 12, 2019.*
  - *HDOT conducted the its second regular on-site during April.* These will be held every other month until the project is open to the interim revenue service. HDOT intends to hold the site visits concurrent with PMOC visits to ensure sufficient communication and cooperation between the two.
  - The O&M Roadmap is being integrated into the Rail Activation Plan (RAP). The Director of Readiness and Activation stated that he will have the Rail Activation Plan including a Roadmap by the end of 2018. A copy of the RAP was shared with the PMOC at the March 12 meeting. Development of the RAP was one of the new Director's key responsibilities. In addition, DTS has identified a senior staff member who will be responsible for revising the RFMP, provide input into the RAP, and develop the Roadmap.

## 2.11 Project Risk

HART has developed a robust risk management program with support from its Program Management Consultant. They are using a bottoms-up risk modeling approach. The focus is primarily on construction contracts. *PMOC has emphasized that HART must still focus on soft costs, ancillary contracts, and Real Estate since they can impact overall cost and schedule.*

HART's Risk Manager:

- *Reports risk updates by project on a monthly basis. The latest was in February 2019.*
- Performs a model update of the program on a quarterly basis. The latest quarterly update was December 2018. *In its March 2019 Monthly Progress Report, based on February 2019 risk data, HART reported:*
  - *An 80% confidence level that the project will be completed at or below \$7.923 billion, which is within the overall project budget of \$8.165 billion. The cost at completion forecast decreased by \$17.6 million over the prior update.*
  - *The 65% confidence level for completing the project by the full RSD is February 2026. This result is based on using a Design-Build approach to project completion. HART continues to believe the December 2025 RSD may be attainable. HART intends to evaluate the effect of changing to a P3 procurement for the City Center*

section in the next several months to address more accurately the revised P-65 completion date.

## 2.12 Action Item Table

Item No.	Item	Responsible Party	Date Identified	Date Due	Date Completed	Status
8.15.18-5	AHJV Construction Safety Manager Status	HART	August 2018	January 2019		Bob Davis serves in interim role. A candidate had been identified for a permanent solution on site, but the individual chose not to accept the position. Bob Davis is approved to remain in the role until June 30, 2019.
9.12.18-1	Replace Fiscal Officer and Grant Manager	HART	September 2018	September 28, 2018		Fiscal Officer position has been filled by former Grant Manager (Ruth Lohr). Grant Manager position is now vacant, and being recruited. The Chief Financial Officer position is now vacant and being filled on interim basis by the Fiscal Officer.
9.12.18-2	West Oahu Station Property Rights/ DR Horton	HART	September 2018	TBD		DLNR wishes to retain its airspace rights over the parking lot for its future use. DLNR has asked HART to facilitate the transactions necessary to meet its demands. Cost to bring utilities to the property being negotiated. DLNR property cannot be condemned until all issues are resolved.
10.17.18-01	Provide PMOC with copy of DTS-HART Memorandum of Agreement	DTS	October 2018	October 2018	April 12, 2019	Completed

Item No.	Item	Responsible Party	Date Identified	Date Due	Date Completed	Status
10.17.18-05	Provide contingency drawdown curves in Monthly Report in November and at November oversight meetings	HART	October 2018	November 2018		Final updated version was handed out at March Progress Meeting. Cost and Schedule Curves to be included in the March Monthly report and all Monthly Progress Reports thereafter. <i>HART did not include in the March report, nor did they provide the curves.</i>
1.10.19-02	Calculation of DBE Goal Attainment: Report to FTA with recommendation that FTA review HART program and calculation.	PMOC	January 2019			This needs to be a discussion between HART, DTS and FTA.
3.13.19-01	HART full description of failed NFPA 130 Fire Test for vehicles.	HART	March 2019	April 1, 2019	3/27/19	Complete
4.10.19-01	<i>HART to provide Layout drawing of Howard Hughes property</i>	HART	April 2019	June 12, 2019		<i>HART to share at June Progress Meeting</i>
4.10.19-03	<i>HART to send Real Estate Matrix</i>	HART	April 2019	April 15, 2019	4/10/19	Complete
4.10.19-04	<i>HART to submit HART/DTS MOU</i>	HART	April 2019	April 12, 2019	4/12/19	complete
4.10.19-05	<i>HART to send updated Contingency draw down curves</i>	HART	April 2019	April 19, 2019		<i>Cost curve was sent, No schedule curve.</i>
4.10.19-05	<i>Hart Safety to notify PMOC when the Safety Certification schedule has been incorporated into the MPIS</i>	HART	April 2019			
4.10.19-06	<i>HART Core System to send Project test plan to PMOC</i>	HART	April 2019			
4.10.19-07	<i>PMOC to request FTA have a the Region Real Estate resource participate in the April 29, 2019 Breakout session</i>	PMOC	April 2019	April 15, 2019	April 15, 2019	<i>FTA will participate on conference call.</i>

### 3.0 APPENDICES

#### Appendix A: Acronym List

AGS	▪ Airport Guideway and Stations
AHJV	▪ Ansaldo Honolulu Joint Venture
AIS	▪ Archeological Inventory Survey
ARRA	▪ American Recovery and Reinvestment Act
ATC	▪ Alternative Technical Concepts
BAFO	▪ Best and Final Offer
BCE	▪ Base Cost Estimate
BFMP	▪ Bus Fleet Management Plan
CCGS	▪ City Center Guideway and Stations
CE&I	▪ Construction Engineering and Inspection
CMP	▪ Construction Management Plan
CPP	▪ Contract Packaging Plan
CROE	▪ Construction Right of Entry
CSC	▪ Core Systems Contract
CSL	▪ Cross-hole Sonic Logging
DAGS	▪ Department of Accounting & General Services
DB	▪ Design-Build
DBB	▪ Design-Bid-Build
DBOM	▪ Design-Build-Operate-Maintain
DCCA	▪ Department of Commerce and Consumer Affairs
DHHL	▪ Department of Hawaiian Home Lands
DLNR	▪ Department of Land and Natural Resources
DOL	▪ Department of Labor
EAC	▪ Estimate at Completion
EIS	▪ Environmental Impact Statement
FD	▪ Final Design
FEIS	▪ Final Environmental Impact Statement
FFGA	▪ Full Funding Grant Agreement
FHSG	▪ Farrington Highway Station Group
FPO	▪ Federal Preservation Officer
FTA	▪ Federal Transit Administration
FY	▪ Fiscal Year
GEC	▪ General Engineering Consultant
GET	▪ General Excise Tax
GSA	▪ General Services Administration
HART	▪ Honolulu Authority for Rapid Transportation
HDOT	▪ Hawaii Department of Transportation
HECO	▪ Hawaiian Electric Company
IFB	▪ Invitation to Bid
KHG	▪ Kamehameha Highway Guideway
KHSG	▪ Kamehameha Highway Stations Group
KIWC	▪ Kiewit Infrastructure West Company
KKJV	▪ Kiewit Kobayashi Joint Venture
LCC	▪ Leeward Community College
LRV	▪ Light Rail Vehicle
MCC	▪ Management Capacity and Capability
MMP	▪ Mitigation Monitoring Program
MOU	▪ Memorandum of Understanding
MOW	▪ Maintenance of Way
MPR	▪ Monthly Progress Report (prepared by HART)
MPS	▪ Master Project Schedule
MSF	▪ Maintenance and Storage Facility

NCR	▪ Non-Compliance Report
NEPA	▪ National Environmental Policy Act
NTP	▪ Notice to Proceed
O&M	▪ Operations & Maintenance
OCIP	▪ Owner Controlled Insurance Program
OP	▪ Oversight Procedure
P3	▪ Public Private Partnership
PHPS	▪ Pearl Highlands Parking Structure
PMOC	▪ Project Management Oversight Contractor
PMP	▪ Project Management Plan
PMSC	▪ Project Management Support Consultant
PSG	▪ Platform Screen Gate
QA/QC	▪ Quality Assurance/Quality Control
QAM	▪ Quality Assurance Manager
QMP	▪ Quality Management Plan
RAMP	▪ Real Estate Acquisition and Management Plan
RCMP	▪ Risk and Contingency Management Plan
RFB	▪ Request for Bids
RFMP	▪ Rail Fleet Management Plan
RFP	▪ Request for Proposals
RFQ	▪ Request for Qualifications
ROC	▪ Rail Operations Center
ROD	▪ Record of Decision
ROE	▪ Right of Entry
ROW	▪ Right of Way
RSD	▪ Revenue Service Date
RWP	▪ Roadway Workers Protection
SCC	▪ Standard Cost Category
SOA	▪ State Oversight Agency
SSCP	▪ Safety and Security Certification Plan
SSMP	▪ Safety and Security Management Plan
SSPP	▪ System Safety Program Plan
SSRC	▪ System Safety Review Committee
SSSPS	▪ System Safety and Security Program Standards
STCC	▪ Specification Testing Conformance Checklist
TBD	▪ To be Determined
UH	▪ University of Hawaii
USN	▪ United States Navy
USPS	▪ United States Postal Service
WOFH	▪ West Oahu/Farrington Highway
WOSG	▪ West Oahu Stations Group
YOE	▪ Year of Expenditure



## Appendix B: Contract Status

CPP	Description	Contractor	Original Contract Value	CCO	Current Contract Value	Expended	% Exp.	Award Date	Original Compl. Date	Rev Compl. Date	Notes
DB120	WOFH DB	KIWC	482,924,000	185,351,685	667,781,886	667,781,906	100%	11/11/09	10/21/13	03/03/17	Closeout ongoing
DB200	MSF DB	Kiewit/Kobayashi JV	195,258,000	86,517,032	281,775,032	281,775,032	100%	06/30/11	12/20/14	07/02/16	Closeout ongoing
DB320	KHG DB	KIWC	372,150,000	31,439,030	403,589,030	403,489,029	100%	06/30/11	10/15/14	09/30/17	Closeout ongoing
DB450	AGS DB	STG JV	874,750,000	(14,010,671)	860,739,329	376,657,078	44%	09/20/16	05/01/21	05/03/21	
DBB171	WOSG	Nan, Inc.	56,088,470	14,051,833	70,140,303	48,156,550	69%	07/20/15	03/12/18	07/02/18	
DBB271	FHSG	Hawaiian Dredging	78,999,000	11,641,000	90,640,000	77,302,514	85%	06/22/15	01/16/18	1/16/19	
DBB371	KHSG	Nan, Inc.	115,805,845	7,388,138	123,193,983	57,026,891	46%	01/27/16	05/17/19	05/17/19	
DBB385	Ramp H2R2	Royal Contracting	5,203,646	489,132	5,692,778	5,377,860	95%	05/18/15	10/02/16	02/28/18	
DBB505	Airport Utilities DBB	Nan, Inc.	27,993,290	726,200	28,719,489	28,719,489	100%	06/30/14	02/06/16	10/07/16	
DBB525	Airport GW 7-Pier DBB	HDCC/CJA JV	3,973,000	54,843	4,027,843	4,027,843	100%	09/18/14	02/28/15	04/24/15	Closed
DBB511	City Center Utilities Relocation Construction	Nan, Inc.	400,000,000	0	400,000,000	5,127,199	1%	05/31/18	05/31/22	05/31/22	
DBB602	UHWO Temp PnR /Road B	Nan, Inc.	11,589,300	1,283,023	12,872,323	6,833,755	53%	12/15/17	7/16/2019		
DBOM920	Core CSC DBOM	Ansaldo/Honolulu JV	573,782,793	42,699,327	616,482,120	382,462,101	62%	11/28/11	03/15/19	6/2019	Schedule will be revised to reflect CAM dates when better information is available.
FD140	WOSG FD	AECOM	7,789,000	5,642,995	13,431,995	12,628,233	94%	06/15/12	11/14/16	11/30/19	Term of contract until completion of services
FD240	FHSG FD	AECOM	9,300,696	7,197,120	16,497,816	15,516,398	94%	01/12/11	11/14/16	11/30/19	Term of contract until completion of services
FD340	KHSG FD	Anil Verma, Inc.	8,702,592	4,264,554	12,967,146	12,355,088	95%	11/16/12	06/14/17	11/30/19	Term of contract until completion of services
FD430	Airport GW & Util. FD	AECOM	38,840,960	4,111,440	42,952,400	43,030,756	100%	12/22/11	06/30/17	06/30/17	Closeout ongoing
FD440	ASG FD	AECOM	10,177,365	(117,545)	10,059,820	10,059,820	100%	11/07/12	01/27/14	07/01/15	Closeout ongoing
FD530	CC GW & Util FD	AECOM	43,948,220	13,941,087	57,889,307	53,890,533	93%	07/30/12	04/30/18	09/30/19	Combined with Dillingham and Kaka'ako Stations into DB Contract.
FD550	DKSG FD	Perkins & Will	18,321,918	(6,020,837)	12,301,081	12,253,081	100%	08/08/13	11/01/14	01/15/16	Closeout ongoing
MI900	Fare Collection DFI	INIT	15,464,198	361,470	15,825,668	5,468,495	35%	4/18/2016	01/14/29	01/14/29	
FD701	KH Civil Design	Lyon Associates	60,000	0	60,000	60,000	100	01/28/18	01/31/19	01/31/19	
MI930	Elevators & Escalators	Schindler	50,982,714	3,491,495	54,474,209	18,757,343	34%	07/31/13	05/01/18	05/17/19	Schedule may be delayed due to revised CAM dates.
MM290	CEI West	PGH Wong	54,232,480	36,000,000	90,232,480	70,859,800	79%	01/09/14	01/08/20	01/08/20	
MM595	CEI East	AECOM	63,083,417	(50,377,317)	12,706,100	12,711,366	100%	01/07/14	01/06/19	01/06/16	
MM596	CEI East 2	Stantec	55,036,130	0	55,036,130	41,168,270	75%	9/10/2015	12/31/19	12/31/19	Option for up to 2-year extension
MM901	PMSC-2	HDR	33,376,897	16,359,765	49,736,662	49,736,662	100%	02/23/12	03/07/17	03/07/17	Closeout Ongoing
MM902	PMSC-3	HDR	63,522,953		63,522,953	22,859,333	36%	1/1/2017	12/31/22	12/31/22	
MM905	GEC 1	PB	0	79,171,852	79,171,852	74,157,822	94%	8/24/2007	02/09/10	02/26/11	Closeout Ongoing
MM910	GEC 2	PB	150,226,265		150,226,265	150,226,265	100%	6/30/2011	12/31/14		Closeout Ongoing
MM913	GEC 3	CH2M	46,143,277	17,630,381	63,773,658	54,044,281	86%	12/05/13	04/04/19	04/04/19	Option for up to 3-year extension
MM945	On-Call Contractor	Royal Contracting	1,000,000	1,000,000	2,000,000	2,000,786	100%	08/06/14	07/06/19	12/08/16	Closeout Ongoing
MM946	On-Call Hazmat Removal	CH2M	12,006,227	2,075,000	14,081,227	5,271,807	37%	08/23/12	08/22/19	02/18/23	
MM947	On-Call Contractor 2	Royal Contracting	7,500,000		7,500,000	7,495,456	100%	5/21/2015	05/20/20	05/20/20	
MM948	On-call Contractor 3	Royal Contracting	20,000,000	6,000,000	26,000,000	24,563,100	95%	05/09/16	05/12/23	05/12/23	
MM949	On-call Contractor 4	Royal Contracting	46,000,000	0	46,000,000	8,133,920	18%	01/10/18	11/30/24	11/30/24	
MM951	OCIP	AON	55,870,308	200,000	56,070,308	41,329,755	74%	4/9/2014	04/09/30	04/09/30	
MM962	CSC Support	Lea + Elliott	43,988,989		43,988,989	35,740,447	81%	2/10/2014	09/09/19	09/09/19	Option for up to 3-year extension
MM964	Safety & Security Cons.	Lawson	21,699,279	5,602,596	27,301,876	10,248,761	38%	04/23/14	01/31/17	01/31/19	

## Appendix C: PMOC Team

Name	Position	Background
Michael Radbill, PE	Program Manager	Overall responsibility for Hill's PMO program. Mr. Radbill has over 40 years of technical and management experience in the construction of Federal, state, local, and private projects, which types include public transportation, power generation, petrochemical, correctional, military, aviation, commercial, hotel, and others. Mr. Radbill was Task Order Manager for oversight of major rehabilitation projects undertaken by the Washington Metropolitan Area Transit Authority. He was responsible for developing, updating, and analyzing critical path method (CPM) schedules; participation in resolution of construction disputes during negotiation, mediation, mini-trial, and trial; testifying as an expert at trial regarding delays and damages; arbitrating construction disputes as a AAA arbitrator. Mr. Radbill helped to develop and taught as lead instructor the National Transit Institute's Management of Transit Construction projects and as assistant instructor for the NTI course Quality Assurance and Quality Control for Transit Projects.
Danny Rogers, PE	Task Order Manager	Responsible for oversight of this task order. He has more than 30 years of experience managing a wide variety of multidisciplinary engineering projects in the transit and highway fields. His transit experience includes Bus Rapid Transit and light rail projects. The majority of his transit work has been in the North Carolina, including work with the North Carolina Department of Transportation, Charlotte Area Transit System and GoTriangle. The last fifteen years Mr. Rogers served as the Project Director for New Starts Projects for the CATS Blue Line Extension and then most recently with the GoTriangle Durham-Orange Light Rail Project..
Stephen Smith, PE	Civil Engineer	Stephen T. Smith, P.E., has more than 16 years of comprehensive and progressive project and construction management experience in complex public transit and transportation projects. This experience includes civil engineering; planning, design, and engineering document review; design oversight and support during construction; construction planning, practices and methods; change management, claims, negotiations, and dispute resolution; project controls; cost estimating; alternative project delivery methods; contract procurement; quality assurance/quality control; and infrastructure asset maintenance management. His transit, transportation, and general rail project and construction management experience includes streetcar; light rail; commuter rail; freight rail; BRT; rail and bus maintenance and support facilities; rail vehicle procurement; and municipal, state, and interstate bridge, roadway, and facility construction and maintenance.
Chen Zhou, EIT	Construction Management Manager	Responsible for oversight of construction management activities and project scheduling. She
James Oswell, CCP	Cost Estimating Manager	Responsible for oversight of cost estimating and cost control. Mr. Oswell has 50 years of experience in the construction industry as a cost estimator and cost analyst. His career has focused on cost estimating, scheduling, project management, value engineering, claims resolution, and change order request processing for a wide range of projects including transit/transportation and heavy civil construction. He specializes in escalation forecasting services for large capital programs for federal, state and local agencies. He has experience in the development and reconciliation of design phase estimates for transportation projects and he has established standards for designer-provided third-party estimates. He is skilled at developing and maintaining current cost databases for specific geographical areas, as well as working with industry cost databases. In addition, Mr. Oswell has experience supervising the review of contractor progress schedules and pay applications.

<b>Name</b>	<b>Position</b>	<b>Background</b>
Ben Booterabi, EIT	Project Scheduling Manager	Responsible for oversight of project scheduling. On the \$450 million Lynx Blue Line South Corridor 9.6-mile light rail project for CATS, Mr. Booterabi was the Task Order Manager responsible for providing monthly and quarterly reports to FTA, participating in the risk assessments; verifying grantee regulatory and compliance with federal and state requirements; reviewing and monitoring the project's schedule, budget and design to ensure conformance with design criteria; evaluating the grantee's technical capacity and capability; reviewing and monitoring the project's scope, schedule, and budget. He has more than 30 years working on transportation projects as an assistant project manager, task order manager, lead project controls manager, claims specialist, project coordinator/planner, troubleshooter, cost control engineer and scheduler. He is proficient in Oracle Primavera P3 and P6, Sure Track, Project System (SAP), internet-based management systems and Microsoft Project.
Dain Pankratz, PE	Systems Safety Manager	Mr. Pankratz is responsible for oversight of safety and security activities. He is a Registered Professional Engineer (M-34042) in California, and is a nationally Certified Safety Professional (CSP), CSP-29902. On the 61-mile Central Florida Commuter Rail Transit Project, he was the Systems Safety Manager supporting oversight of safety and security design, construction, testing and startup. Mr. Pankratz was also the Systems Safety Manager supporting oversight of safety and security design, construction, testing and startup on MWAA's Dulles Corridor Metro Project, a 23.1-mile rapid transit system in Northern Virginia with total budget estimated over \$7 billion. Mr. Pankratz is the Systems Safety Manager supporting oversight of.
Brian Clark, EIT	Systems Integration Manager	Mr. Clark has 30 years of experience in all project phases of rail rapid transit systems. He provides rail signaling and communication system engineering, construction, testing and technical training services to major transit authorities, including for several major city transit agencies, including New York City Transit Authority and the Port Authority of New York and New Jersey. He has been directly involved in the design and construction of rail control centers, signaling and communication systems, rehabilitation of mainline territory, interlocking locations and yards, as well as bridge and tunnel rehabilitation projects. Mr. Clark also provides track inspection and track buckling inspection services and maintains railway grade crossing warning systems.
Arun Virginkar	Rail Equipment Engineer	Responsible for oversight of rail vehicle engineering and Buy America compliance. He has been involved with the PMOC Program since 1994. He has experience in contract management, vehicle and systems equipment engineering, operations and maintenance planning, system integration and testing, safety certification plans, and quality and system assurance. He also has specialized experience in Buy America Pre-Award and Post-Delivery audits of car builders.
Bob Merryman, Licensed Real Estate Appraiser (Missouri)	Real Estate Manager	Responsible for oversight of real estate activities on the project. He has 35 years of practical experience in the implementation of the Uniform Act in federally funded projects. In addition, he has written three text books used by FHWA, as well as the one additional course text used by the FTA discussing the implementation of the Uniform Act. He also served as lead investigator on the business retrospective study for the Federal Highway Administration. The information gleaned from this investigation was to develop the most recent revisions to 49 CFR Part 24.
David Sillars, PhD	Risk Assessment Manager	Responsible for oversight of the risk management activities for the project. He has over 35 years of experience in risk and management consulting and transportation research. He assisted FTA with editing and developing the updated MAP-21 Risk and Contingency Management Oversight Procedure (OP 40) and updated FTA risk workbook. He has co-developed and delivered the New Starts risk management training program for the National Transit Institute on behalf of the FTA.

<b>Name</b>	<b>Position</b>	<b>Background</b>
Robert Mowry	Transit Operations Manager	Responsible for oversight of the transit operations planning for the project. As General Manager/Chief Operating Officer at Maryland Transit Administration, Mr. Mowry provided executive leadership for a public transit agency with over 3,200 employees that directly operated fixed route bus service, commuter bus and rail, heavy rail, light rail and paratransit services. Mr. Mowry had overall responsibility for the operation, maintenance, finance, administration, planning, policy, engineering and customer service functions of the agency. Mr. Mowry had responsibility and control of the 6 year \$1.4 billion dollar capital program which included the introduction of 230 new buses into the fleet, completion of the FTA's funded light rail double track project, and a heavy rail car fleet mid-life overall project. Mr. Mowry presented status of projects, financial budgets, responses and corrective actions for legislative audit findings and collective bargaining agreement negotiations to various MDOT executive staff and Maryland General Assembly Committees.

## Appendix D: Project Overview and Map

**Date:** June 2018  
**Project Name:** Honolulu Rail Transit Project  
**Grantee:** City and County of Honolulu  
**FTA Regional contact:** Catherine Luu  
**FTA HQ contact:** Chris Hudson

### SCOPE

<b>Description</b>	The proposed Project is an approximately 20-mile rail alignment extending from East Kapolei to Ala Moana Center.
<b>Guideway</b>	The majority of the Project is to be built on aerial structure, but the Project also includes a short at-grade section (0.6 miles).
<b>Stations</b>	21 stations (20 aerial and 1 at-grade)
<b>Support Facility</b>	Maintenance and Storage Facility (located near Leeward Community College)
<b>Vehicles</b>	80 light metro rail
<b>Ridership</b>	104,300 weekday boardings in 2019; 119,600 weekday boardings in 2030

### SCHEDULE <sup>1</sup>

10/09 Approval Entry to PE	03/19 Estimated RSD at Entry to PE
12/11 Approval Entry to FD	03/19 Estimated RSD at Entry to FD
06/12 Request for FFGA	03/19 Estimated RSD at Request for FFGA
12/12 FFGA	01/20 RSD at FFGA
09/17 Recovery Plan	12/25 RSD at Recovery Plan
11/18 Recovery Plan	09/26 RSD at Recovery Plan

### COST <sup>2</sup>

\$5.348 B Total Project Cost (\$YOE) at Approval Entry to PE  
 \$5.126 B Total Project Cost (\$YOE) at Approval Entry to FD  
 \$5.122 B Total Project Cost (\$YOE) at request for an FFGA  
 \$5.122 B Total Project Cost (\$YOE) at FFGA  
 \$9.188 B Total Project Cost (\$YOE) at 2018 Recovery Plan

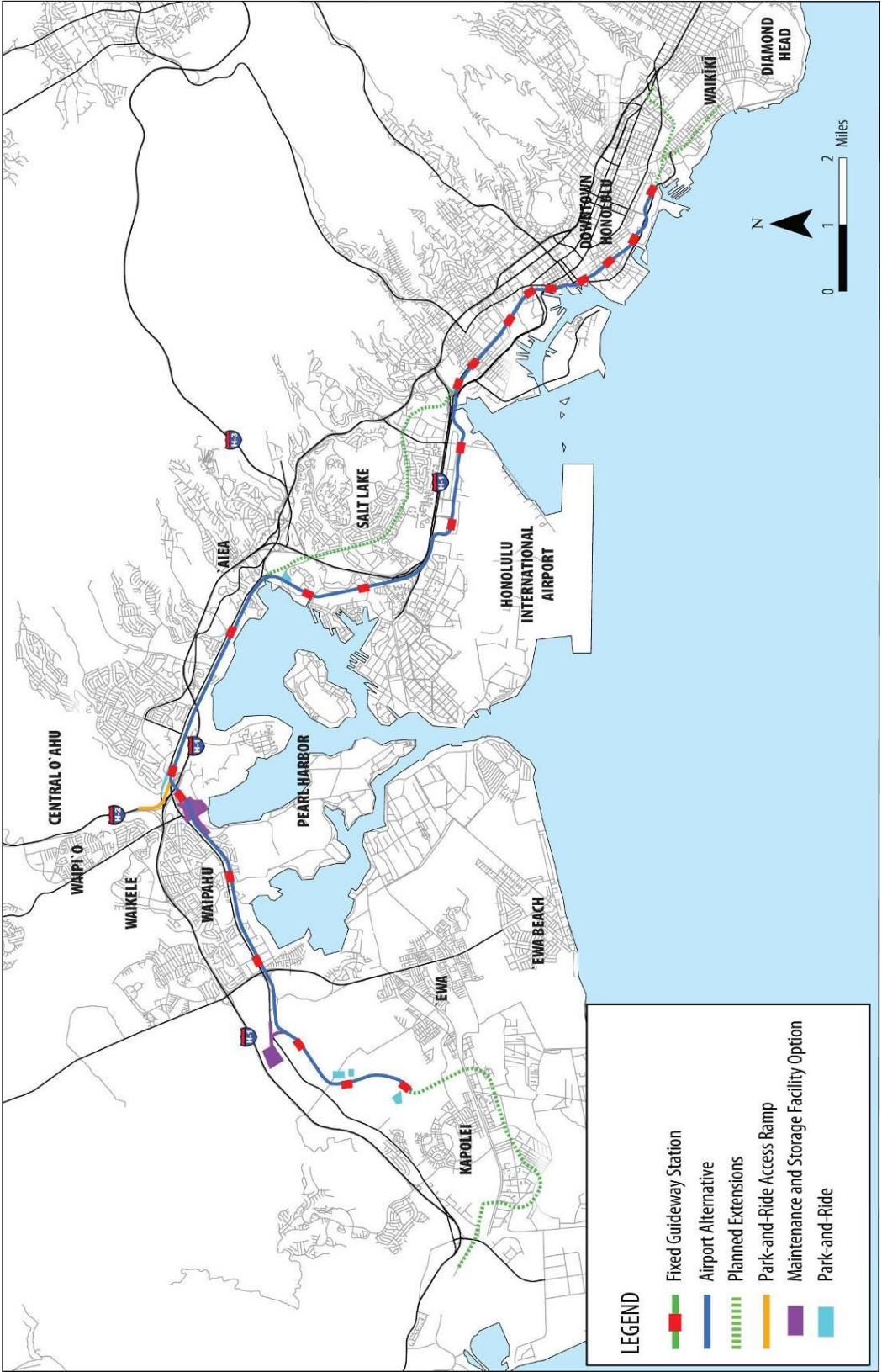
*\$3.551 billion Amount of Expenditures at date of this report*  
*48.7% complete (Total Project Expenditures/EAC)*

### Notes

FTA and PMOC reviewed HART's Recovery Plan dated September 2017. A Risk Refresh Workshop was held February 27, 2018 to address HART's updated Estimate at Completion (EAC) and MPS that were provided in December 2017. That workshop predicted a p50 level budget of \$8.413 billion (excluding financing costs) and a 65% confidence level for RSD no earlier than November 2026.

Based on the Risk Refresh, FTA directed HART to revise the Recovery Plan to include a new RSD of September 2026 and add \$134 million of contingency. HART has submitted an updated Recovery Plan that includes the revised RSD and budget (\$9.188 Billion), which FTA and the PMOC are currently reviewing.

Honolulu Rail Transit Project Map



## Appendix E: Safety and Security Checklist (Updated October 2018)

<b>Project Overview</b>			
Project Name	Honolulu Rail Transit Project		
Project mode (Rail, Bus, BRT, Multimode)	Rail		
Project phase (Preliminary Engineering, Final Design, Construction, or Start-up)	Construction		
Project Delivery Method (Design/Build, Design/Build/Operate Maintain, CMGC, etc.)	DB, DBB, DBOM, and DBOFM		
<b>Project Plans</b>	<b>Version</b>	<b>Review by FTA</b>	<b>Status</b>
Safety and Security Management Plan	6	Y	Complete
Safety and Security Certification Plan	6	Y	Complete
Public transportation Agency Safety Plan (PTASP) Part 673 now requires PTASP (instead of SSPP)		N/A	Mar-2019
System Security Plan or Security and Emergency Preparedness Plan (SSEPP)		N/A	Mar-2019
Construction Safety and Security Plan	4	Y	Complete
<b>Safety and Security Authority</b>	<b>Y/N</b>		<b>Status</b>
Is the grantee subject to 49 CFR Part 659/674 state safety oversight requirements?	Y		
Has the state designated an oversight agency as per Part 659.9/674	Y		Executive Order 10-04 effective April 6, 2010
Has the oversight agency reviewed and approved the grantee's SSPP as per Part 659.17/674?	N/A		Not required until startup (2019/2020)
Has the oversight agency reviewed and approved the grantee's Security Plan or SEPP as per Part 659.21?	N/A		Not required until startup (2019/2020)
Did the oversight agency participate in the last Quarterly Program Review Meeting?	Y		Also Participates in Monthly Meeting
Has the grantee submitted its safety certification plan to the oversight agency?	Y		
Has the grantee implemented security directives issued by the Department Homeland Security, Transportation Security Administration?	N		None issued to date
<b>SSMP Monitoring</b>			
Is the SSMP project-specific, clearly demonstrating the scope of safety and security activities for this project?	Y		
Grantee reviews the SSMP and related project plans to determine if updates are necessary?	Y		
Does the grantee implement a process through which the Designated Function (DF) for Safety and DF for Security are integrated into the overall project management team? Please specify.	Y		
Does the grantee maintain a regularly scheduled report on the status of safety and security activities?	Y		Reported Monthly
Has the grantee established staffing requirements, procedures and authority for safety and security activities throughout all project phases?	Y		
Does the grantee update the safety and security responsibility matrix/organization chart as necessary?	Y		
Has the grantee allocated sufficient resources to oversee or carry out safety and security activities?	Y		Contractor safety resources a concern

Has the grantee developed hazard and vulnerability analysis techniques, including specific types of analysis to be performed during different project phases?	Y	
Does the grantee implement regularly scheduled meetings to track to resolution any identified hazards and/or vulnerabilities?	Y	
Does the grantee monitor the progress of safety and security activities throughout all project phases? Please describe briefly.	Y	
Does the grantee ensure the conduct of preliminary hazard and vulnerability analyses? Please specify analyses conducted.	Y	
Has the grantee ensured the development of safety design criteria?	Y	
Has the grantee ensured the development of security design criteria?	Y	
Has the grantee verified conformance with the safety and security requirements in the design?	Y	Ongoing
Has the grantee identified conformance with safety and security requirements in equipment and materials procurement?	Y	Ongoing
Has the grantee verified construction specification conformance?	Y	Ongoing
Has the grantee identified safety and security critical tests to be performed prior to passenger operations?	N	Will be done during Rail Activation phase
Has the grantee verified conformance with safety and security requirements during testing, inspection and start up phases?	N	Will be done during Rail Activation phase
Does the grantee evaluate change orders, design waivers, or test variances for potential hazards and/or vulnerabilities?	Y	Ongoing
Has the grantee ensured the performance of safety and security analyses for proposed work-arounds?	N	Will be done during Rail Activation phase
Has the grantee demonstrated through meetings or other methods, the integration of safety and security in the following? <ul style="list-style-type: none"> <li>• Activation Plan and Procedures</li> <li>• Integrated Test Plan and Procedures</li> <li>• Operations and Maintenance Plan</li> <li>• Emergency Operations Plan</li> </ul>	N	Will be done during Rail Activation phase
Has the grantee issued final safety and security certification?	N	Will be done after completion of Rail Activation phase
Has the grantee issued the final safety and security verification report?	N	Will be done during Rail Activation phase
<b>Construction Safety</b>		
Does the grantee have a documented/implementation Contractor Safety Program with which it expects contractors to comply?	Y	CSP development is included in construction contracts
Does the grantee's contractor(s) have a documented company-wide safety and security program plan?	Y	Is a requirement of CSSP
Does the grantee's contractor(s) have a site-specific safety and security program plan?	Y	Is a requirement of CSSP
Provide the grantee's OSHA statistics compared to the national average for the same type of work?	Y	Reported Monthly



If the comparison is not favorable, what actions are being taken by the grantee to improve its safety record?	Y	Ongoing
Does the grantee conduct site audits of the contractor's performance versus required safety/security procedures?	Y	Audit required in CSSP
<b>Federal Railroad Administration</b>		
If the shared track: has the grantee submitted its waiver request application to FRA? (Please identify any specific regulations for which waivers are being requested)	NA	
If the shared corridor: has grantee specified specific measures to address shared corridor safety concerns?	NA	
Is the Collision Hazard Analysis underway?	NA	
Other FRA required Hazard Analysis – fencing, etc.?	NA	
Does the project have Quiet Zones?	NA	
Does FRA attend Quarterly Review Meetings?	NA	

## Appendix F: Third Party Agreements

Agency STATE	Pending Agreements	Target	Section	CROE*	Notes/Remarks
UH – University of Hawaii, West Oahu (UHWO) East Kapolei	Construction Right of Entry and Occupancy & Use Agreement for East Kapolei Temporary Park & Ride	TBD/ Estimate 2021	WOFH	Yes	Temporary Park and Ride and Road B (connector road) under construction on UH property. HART continues to coordinate and work with UH on final disposition in control.  Negotiations on-going on CROE to expand it to include anticipated sewer work at East Kapolei Station. This will also include an amendment to NAN, Inc. CROE as the contractor to perform sewer line work.
UH – Urban Gardens	Conveyance to HDOT(H) – Dept. of Transportation Highways	Jan 2020	KHG	Yes	2 <sup>nd</sup> Amendment to HART Right of Entry fully executed. Royal Contracting secured Right of Entry (ROE) for road, retaining wall, and concrete culvert improvements. Based on final Phase II results, HDOT has issued a concurrence letter. Construction complete date estimated May 2019.
UH – Honolulu Community College (HCC)	Construction Right of Entry for guideway & station	April 2019	CC	No	Pending design finalization. Working with UH regarding ROE Agreement. Draft ROE agreement under review by COR. ROE will be broken down into phases starting with least intrusive activity. Demolition and preliminary construction activities completed under letter agreement with Royal Construction.
DLNR – Dept. of Land & Natural Resources	Kapolei Easement Agreement for overhead guideway and for park and ride facility	June 2019	WOFH	Yes	In process. Subdivision application approved by DPP. Transmitted to DLNR for land court submittal.
DLNR/C&C Wastewater Div.	Easement Agreement	May 2019	CC		In process. DLNR working with DAGS survey group to address questions regarding final easement map.
DOE - Waipahu HS	Permanent Easement (State portion)	May 2019	WOFH		In process. Construction is not impacted as the ROE for right to access and construct is executed. With DOE for review. Working with DLNR for permanent rights.

Agency	Pending Agreements	Target	Section	CROE*	Notes/Remarks
DOE – Dept. of Education Waipahu HS	Memorandum of Understanding (State portion)	May 2019	WOFH	Yes	In process. Construction is not impacted as the ROE for right to access and construct is executed. <i>With DOE for review. Working with DLNR for permanent rights.</i>
DOE – Waipahu HS	Memorandum of Understanding (City portion)	July 2019	WOFH	Yes	In process. HART met with DOE on 10/3/2018. Proposed MOU with DTS comments submitted for DOE and AG review. <i>Negotiations have stalled until the DOE sees progress toward satisfactory settlement in its claim against the contractor.</i> Construction is not impacted as the ROE for right to access and construct is executed. Working with City for permanent rights.
DOE – Waipahu HS	Permanent Easement (City portion)	May 2020	WOFH	Yes	Permanent easement from City in process. DLM has indicated they will delay the transfer of the City portion to the State until HART has permanent entitlements in place. Construction is not impacted as the Master/Construction Agreement is executed. Working with BFS for permanent rights.
Aloha Stadium / Dept. of Accounting & General Services (DAGS)	Easement Agreement for guideway	Jan 2020	KHG	Yes	In process. <i>Easement maps and legal descriptions for permanent easements now under review by Aloha Stadium.</i> Construction is not impacted as the ROE for right to access and construct is executed. Working on Permanent Easement agreement.
Aloha Stadium/ DAGS	Easement Agreement for station park and ride	Jan 2020	KHG	Yes	In process. <i>Easement maps and legal descriptions for permanent easements now under review by Aloha Stadium.</i> Construction is not impacted as the ROE for right to access and construct is executed. Working on Permanent Easement agreement.
HDOT(H) – Dept. of Transportation Highways	Master Agreement Amendment	July 2019	WOFH	Yes	Construction is not impacted as the Joint Use & Occupancy Agreement (JU&O) for right to access and construct is executed.
HDOT(H) and (A) – Dept. of Transportation Highways & Airports	Master Agreement for KHG, Airport and City Center Amendment	July 2019	KHG/ Airport/ CC	Yes (KHG/ AGS)	Construction is not impacted as the JU&O for right to access and construct for City Center will be executed when NTP is issued.

Agency	Pending Agreements	Target	Section	CROE*	Notes/Remarks
HDOT(H)	Joint Use & Occupancy (JU&O) Sub-agreement	July 2019	WOFH	Yes	In process. Construction is not impacted as the JU&O for right to access and construct is executed.
HDOT(H)	Joint Use & Occupancy (JU&O) Sub-agreement	July 2019	CC		In process. Construction is not impacted as the JU&O will be executed when Notice to Proceed (NTP) is issued.
HCDA -HI Community Development Authority	Construction ROE, License Agreement, & Final Disposition	April 2019	CC		Coordination is ongoing. ROE for Royal Contracting pre-construction activities executed July 13, 2018 and in effect for one year. HART will need to appear before HCDA Board for construction ROE (construction of guideway improvements and utility relocation) approval.
DAGS – Dept. of Accounting & General Services / Hi Housing Finance & Development Corp (HHFDC)	Construction Right of Entry for City Center for Liliha Civic Center.	April 2019	CC		ROE and Grant of Easement (GOE) request sent to DLNR for review and routing. Supplemental letter sent to DLNR. DLNR will circulate to all stakeholders for 30 day review.
DAGS	Easement Agreement for City Center for Liliha Civic Center.	Aug 2020	CC		In process.
Kalihi Kai Elementary	Right of Entry from DOE/DLNR	June 2019	City Center		On hold.
Kalihi KAI Elementary	Easement Agreement	Feb. 2020	City Center		On hold. Once ROE is in place, subdivision map to be completed and submitted to DPP.
State of Hawaii	Easement Agreement	Pending	City Center		Need identified. In process.
<b>FEDERAL</b>					
U.S. Gov't/General Services Administration (GSA)/Federal Courthouse	Master Agreement to include Security & Landscape License Agreement, Utility License Agreement, Guideway License Agreement	May 2019	CC		Master Agreement is signed by GSA and COR. Pending HART and DTS signature. DTS sign off will require City Council approval.
GSA Federal Courthouse	Quitclaim Easement Document	Dec 2019	CC		Under review.
<b>CITY AGREEMENTS</b>					
BFS – Dept. of Budget & Fiscal Svcs	Inter-Agency coordination which may take the form of a ROE, letter of agreement, or license (Continental Investment)	2020	KHG	Via intra-agency coordination	In process.

Agency	Pending Agreements	Target	Section	CROE*	Notes/Remarks
DFM	Easement Agreement for Utilities	May 2019	City Center		Per BFS, no ROE necessary. Only a work permit will be needed. Contractor in process of obtaining a work permit.
DFM	Easement Agreement for Utilities	2020	City Center		Utility agreements on hold.
DTS – Department of Transportation Services	Intra-agency coordination which may take the form of an ROE, letter agreement, or license (Middle Street Station)	2020	AGS	Via Intra-agency coordination	In process.
<b>OTHER</b>					
D.R. Horton	Construction Right of Entry Amendment – D.R. Horton & HART	April 2019	WOFH	Yes	Current efforts are focused on facilitating agreement between HECO and DRH in order to energize the Ho’opili station.
D.R. Horton	Final Easement Agreement	Jan 2020	WOFH	Yes	In process and subject to owner’s development plans. Construction is not impacted.

\*CROE – Construction Right of Entry